

NAVY

JOINT INTEROPERABILITY OF  
TACTICAL  
COMMAND AND CONTROL SYSTEMS  
(JINTACCS)



PROGRAM MANAGEMENT PLAN

30 May 1985

## EXECUTIVE SUMMARY

The purpose of the Navy JINTACCS Program Management Plan is to achieve coherent support to the JINTACCS program from designated Navy participants. As directed by JCS, this program will require extensive participation by the Navy and well coordinated Navy systems engineering, test and evaluation support, and an operational user interaction effort. The JINTACCS program will:

- a. Impact the overall Navy Tactical C<sup>3</sup>I technical and operational structure;
- b. Include both present and future tactical data link capabilities; i.e., bit oriented messages (TADIL A and TADIL J) and Message Text Format messages;
- c. Test Navy C<sup>2</sup> Elements/Systems using a Distributed Land Based Test Configuration;
- d. For developmental interfaces, conduct Developmental Certification (DC) testing, followed by an Operational Effectiveness Demonstration (OED) and continued Configuration Management (CM) testing of the interfaces until approved as a standard;
- e. For operational interfaces, perform configuration management testing and configuration management support for the Joint Chiefs of Staff of the Interface Design Standards (IDS) and Interface Design Handbook (IDH).

The Navy JINTACCS Program Management Plan is a plan of action to support the approved JINTACCS program schedule. It provides for performance of all Navy participatory responsibilities during the development, testing, and OED phases.

The plan identifies the Navy organizations responsible for the execution of the Navy's part of the Joint program as defined in the JINTACCS Management Plan. It identifies those Navy organizations which have responsibilities for equipment, software, testing, fiscal, personnel, operational and planning functions, and the relationships with Joint program entities.

The plan describes the Navy's participation in the preparation and coordination of JINTACCS program documentation and the execution of program plans. The execution of the Navy's part of the program plans involves the preparation of certain Navy implementation and planning documents.

The plan indicates the System Engineering required to:

- a. Implement the Technical Interface Designs in Navy C<sup>2</sup> Elements/Systems and PTUs;
- b. Implement the systems modifications as required in Navy shipboard and airborne platforms to satisfy scheduled OEDs.

The plan outlines the kinds of test support to be planned and executed by Navy organizations. The test program to be supported includes:

- a. Testing of Navy C<sup>2</sup> Elements/Systems to certify technical readiness to join the Joint Test Program;
- b. Support of joint testing as described in the JINTACCS test plans;
- c. Support of OEDs as directed by the designated Unified Commander, U.S. Commander in Chief Atlantic (USCINCLANT);
- d. Testing of Navy JINTACCS platform configurations for interoperability in unique Navy application and load conditions;
- e. Supporting Joint Tactical Air Operations (JTAO), and CM testing.

The plan describes the Navy's participation in the JINTACCS Configuration Management (CM) Program. This includes:

- a. Supporting the maintenance of the CM baselines which are the JINTACCS/JTIDS TIDP-TE series and the operational IDS/IDH;
- b. Ensuring compliance of Navy C<sup>2</sup> Elements/Systems with the JINTACCS Technical Interface Concepts (TIC) and the TIDPs;
- c. Ensuring compliance with the TIDPs of Navy C<sup>2</sup> Elements/Systems installed in ship and aircraft platforms for the OEDs;
- d. Ensuring support and conduct of a life cycle CM program.

The plan introduces a related program for achieving improved interoperability in the Navy under the JINTACCS program. Specific Navy objectives underlying this program effort, in addition to those required to execute the joint program, are:

- a. To ensure that standards developed by JINTACCS recognize Navy requirements, roles, and missions;
- b. To ensure that Navy facilities and systems are capable of implementing JINTACCS standards through appropriate hardware and/or software design and modification efforts;
- c. To minimize the life cycle cost and operational impact of implementing JINTACCS standards;
- d. To increase the operational effectiveness of the Fleet through positive participation in the JINTACCS program;
- e. To ensure that implementation of the joint data exchange standards does not degrade naval operations.

The Navy JINTACCS Program Management Plan will be revised as necessary to support the management of the Navy participation in the JINTACCS Program.

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## CHAPTER I INTRODUCTION

1. GENERAL. The Joint Interoperability of Tactical Command Control Systems (JINTACCS) Program was established in August 1977 after the reorganization of the Ground and Amphibious Military Operations (GAMO) program, with the Chief of Staff, U.S. Army as the designated JCS Executive Agent. The JINTACCS Program functions and resources, including activities, associated funding, personnel, and personnel spaces have been transferred to the Joint Tactical Command, Control, and Communications Agency (JTC3A) since it became operational. The JTC3A was established in July 1984, by DOD Directive, and was operational October 1984. The purpose of the program is to improve the operational effectiveness of the Services (Army, Navy, Air Force and Marine Corps) command and control systems used in support of joint operations. Department of Defense Agencies also included are the intelligence facilities of the National Security Agency (NSA) and the Defense Intelligence Agency (DIA). The Services and Agencies (S/As) are utilizing the program to develop common interface standards and to modify their command and control equipment and procedures as necessary to ensure systems compatibility, interoperability, and operational effectiveness. Within the Navy, OP-942 has been designated as JINTACCS Program Sponsor. Space & Naval Warfare Systems Command 06 (formerly NAVELEX) has been designated the Navy JINTACCS Program Manager, and Space & Naval Warfare Systems Command PDE 109 the Navy TADIL J Program Director. The JINTACCS program includes:

- a. The joint development, testing, implementation and demonstration of the Message Text Format (MTF) standards for the functional segments which have been identified for the MTF portion of the program;
- b. The joint development, testing, implementation, and demonstration of the TADIL J bit-oriented message (BOM) standards for the Joint Tactical Information Distribution System (JTIDS); and
- c. The Configuration Management testing and maintenance of the Joint Tactical Air Operations (JTAO) TADIL A and TADIL B bit-oriented message (BOM) Interface Design Standards (IDS). JINTACCS also provides support for JCS in their configuration management of the JTAO Interface.

1.1 PURPOSE. This document describes the U.S. Navy Management Plan for supporting the JINTACCS Program. It assigns responsibilities to Navy organizations, and describes and supports the Navy role in JINTACCS. This plan constitutes the basic directive for executing the Navy portion of the JINTACCS Program. The document will be revised as necessary to maintain a current plan for the Navy participation in the JINTACCS Program.

1.1.1 OBJECTIVES. Specific Navy objectives in supporting the Joint program will be:

- a. To ensure that standards developed by JINTACCS recognize Navy requirements, roles, and missions;
- b. To ensure that Navy facilities and systems are capable of implementing JINTACCS standards through appropriate hardware and/or software design and modification efforts;
- c. To minimize the life cycle cost and operational impact of implementing JINTACCS standards;

d. To ensure that Navy participation in the JINTACCS program results in increased operational effectiveness of the fleet;

e. To ensure the readiness of Navy Systems/C<sup>2</sup> Elements to participate in joint testing and demonstrations through the conduct of comprehensive intra-Navy testing.

1.1.2 REQUIREMENTS. The program to be managed under this plan will:

a. Identify Navy organizational participation and assign Navy responsibilities for executing the JINTACCS program;

b. Identify resource requirements of Navy JINTACCS program participants;

c. Provide for the generation of Navy implementation documentation;

d. Identify the systems engineering required to modify Navy systems to implement the Technical Interface Design Plans (TIDPs) for JINTACCS MTF, TADIL J, and TADIL A Message Standards;

e. Facilitate the coordination of participating Navy Operational Facilities/C<sup>2</sup> Elements/Systems and their preparation for joint testing, Operational Effectiveness Demonstrations (OEDs), and follow-on worldwide operations;

f. Provide for certifying the readiness of Navy systems to participate in joint testing and OEDs;

g. Support the conduct of Joint Interoperability testing, including Developmental Certification (DC) and Configuration Management (CM) testing;

1.2 SCOPE. This management plan supports the JINTACCS Program Management Plan and other applicable JINTACCS program documentation, and will address all facets of program activity. The Plan will identify those Navy organizations which have operational, fiscal, personnel or training responsibilities, and the relationships of those organizations with one another and with non-Navy entities.

1.3 JINTACCS TESTING. JINTACCS Testing includes Developmental Certification (DC) and Configuration Management (CM) testing. DC tests are conducted during program development. Once a message standard is approved by JCS and considered operational, it becomes subject to CM testing. Joint DC and CM tests are currently conducted and controlled by the Joint Interface Test Force (JITF) located at the Joint Interface Test Center (JITC), Fort Monmouth, New Jersey. The tests are conducted using a geographically-distributed test bed to exercise the operational facilities and supporting tactical command and control systems selected for participation in joint military operations.

1.4 JINTACCS MESSAGE TEXT FORMATS (MTF) AND TADIL MESSAGES. JINTACCS messages include both man/machine readable message text formats (MTF) and high speed, machine-only readable, TADIL messages. JINTACCS TADIL messages include TADIL A (Link-11), and TADIL B (no comparable Navy Link) message standards, which are currently operational, and TADIL J (Link-16) message standards, which are being developed.



1.4.1 JINTACCS MESSAGE TEXT FORMATS (MTF). The objective of the MTF portion of the JINTACCS program is to achieve joint service interoperability of tactical command and control systems using MTF. To facilitate the management and conduct of this portion of the program, the following functional segments of the program have been identified: Intelligence, Air Operations, Operations Control, Fire Support, and Maritime Operations.

1.4.1.1 OPERATIONAL EFFECTIVENESS DEMONSTRATIONS (OEDS). Following the land based DC tests, OEDs will be conducted at the unified Command level during a joint exercise with operational units. USCINCLANT, in collaboration with USCINCRD, has been tasked to conduct all JINTACCS MTF OEDs. MTF OEDs have been conducted/scheduled in 1981, 1983 and 1985 with JINTACCS MTF implementation expected in 1986. No further OEDs are planned.

1.4.1.2 MTF DEVELOPMENT SCHEDULE. See Annex C, Figure C-1.

1.4.2 DEVELOPMENTAL TADIL MESSAGES. The JINTACCS program developmental TADIL effort will be directed toward the development and implementation of TADIL J joint message standards.

1.4.2.1 JTIDS/TADIL J DEVELOPMENT SCHEDULE. See Annex C, Figure C-2.

1.4.3 OPERATIONAL TADIL MESSAGES. In the operational TADIL message portion of the program, JINTACCS has been assigned the responsibility for conducting joint CM tests to ensure the continued interoperability of the operational JTAO systems on TADIL A and TADIL B, as well as TADIL J standards when they become operational.

1.5 NAVY RESPONSIBILITIES. The Joint Chiefs of Staff have designated the Navy operational facilities and systems whose participation is required in this joint program. They have also specified the types of communications to be implemented to achieve the required interfaces. Navy participation must be defined to implement and evaluate modifications to Navy operational facilities and systems in compliance with jointly agreed designs and to support DC Testing, OED, and CM Testing. Specific responsibilities, tasks and procedures of Navy organizations and the application of Navy resources will differ as they apply to:

- a. MTF development, testing, implementation, and demonstration;
- b. TADIL J development, testing, implementation, and demonstration; and
- c. JTAO IDS Configuration Management testing.

1.6 PROGRAMMING AND BUDGETING. The JCS have tasked the Navy to identify program resources and budget funds necessary to accomplish the Navy portions of the program, and to provide this information to the JINTACCS Program Director.

1.6.1 FUNDING REQUIREMENTS. The requirement to provide these funding data for the program is limited to the research, development, test, and evaluation category. The major milestones and scheduled events will provide fiscal year guidance for Navy organizations to program resources and budget the necessary funds. Items which will be programmed and budgeted for will include, but will not necessarily be limited to, the following:

- a. Personnel staffing for JINTACCS program management
- b. Personnel manning for the Navy Representative Office, JTC3A, Ft. Monmouth, NJ
- c. Test unit support
- d. Equipment and system modification to meet JINTACCS Interface Standards
- e. Unique Navy communications and communications equipment at test units.

1.6.2 NAVY JINTACCS PROGRAM MANAGER. The Navy JINTACCS Program Manager, S&NWSYSCOM 06, is also the Navy's Project Manager for PE 64779N/X1080, the Navy's JINTACCS funding line. Navy JINTACCS funding responsibilities consist of three main categories: (1) Development, Joint Testing, Intra-Navy Testing (2) Implementation and (3) Configuration Management. Commands and activities requiring additional funding in order to support JINTACCS testing will assess their requirements and provide them with justification to S&NWSYSCOM 06 in a timely manner. This is necessary to ensure that the funding is available when required.

## CHAPTER II ORGANIZATION AND RESPONSIBILITIES

2. GENERAL. This chapter describes in general terms the JINTACCS organization established by the JCS in SM 184-78, dated 7 March 1978, and reorganized under the JTC3A by DOD Directive 5154.28, dated 5 July 1984. The organization and responsibilities of Navy activities in support of JINTACCS are described in greater detail. The organization and responsibilities described in this chapter will first address the top level organizational relationships of the overall JINTACCS Program, and subsequently separately address the organizational relationships of the three portions of the program.

2.1 TOP LEVEL ORGANIZATIONAL RELATIONSHIPS AND RESPONSIBILITIES. Top level organizational relationships and responsibilities of the JINTACCS Program and of the U.S. Navy, in support of JINTACCS, are described below.

2.1.1 JINTACCS ORGANIZATION. The JINTACCS organization under JTC3A is shown in Figure 2-1 and described below.

2.1.1.1 JINTACCS DIRECTORATES, DIVISIONS, AND BRANCHES (PROPOSED). A description of the JINTACCS functions and organizational relationships of the appropriate JINTACCS directorates, divisions, branches, and other JTC3A offices will be provided upon promulgation by JTC3A, and upon agreement by the Services/Agencies.

2.1.1.2 JINTACCS CONFIGURATION MANAGEMENT DIVISION AND MESSAGE STANDARDS BRANCH. The JINTACCS Configuration Management Division (CMD) and its Message Standards Branch are responsible for performing the CM functions: preparing, processing, and consolidating Operational Interface Change Proposals (OICPs) and Developmental Interface Change Proposals (DICPs); attending, supporting, or chairing joint analysis or configuration management meetings; and publishing and distributing changes to documentation of message standards. The CMD and Message Standards Branch are directly involved with MTF, TADIL J, and JTAO messages.

2.1.1.3 COMMANDER JOINT INTERFACE TEST FORCE (JITF). The Commander JITF is responsible for the development of test materials, including test plans, test procedures, test scenarios, and Interface Operating Procedures (IOPs). He is also responsible for planning, establishing, and operating the Joint Interface Test Center (JITC) to provide the following test support: test conduct, control and monitoring; simulation; data recording; data analysis; and test communications.

2.1.1.4 JINTACCS SERVICE AND AGENCY SUPPORT OFFICES (JSASO). Policy level representation for JINTACCS associated issues will be the responsibility of CNO (OP-942).

2.1.1.5 SERVICE AND AGENCY REPRESENTATIVES OFFICES. Each Service/Agency will provide representatives, in accordance with JTC3A Organization and Mission, to the JTC3A for assistance in matters directly relating to DC and CM testing. These representatives will serve on an attached (vice assigned) basis for a normal tour of three years in order to provide continuity. The major duties for individual representatives will be prescribed by the parent Service/Agency, and each shall remain outside the JTC3A chain of command. Fitness efficiency reporting authority will remain with respective Service/Agency headquarters. When these offices collectively meet they are formally referred to as the Joint Service/Agency Representatives

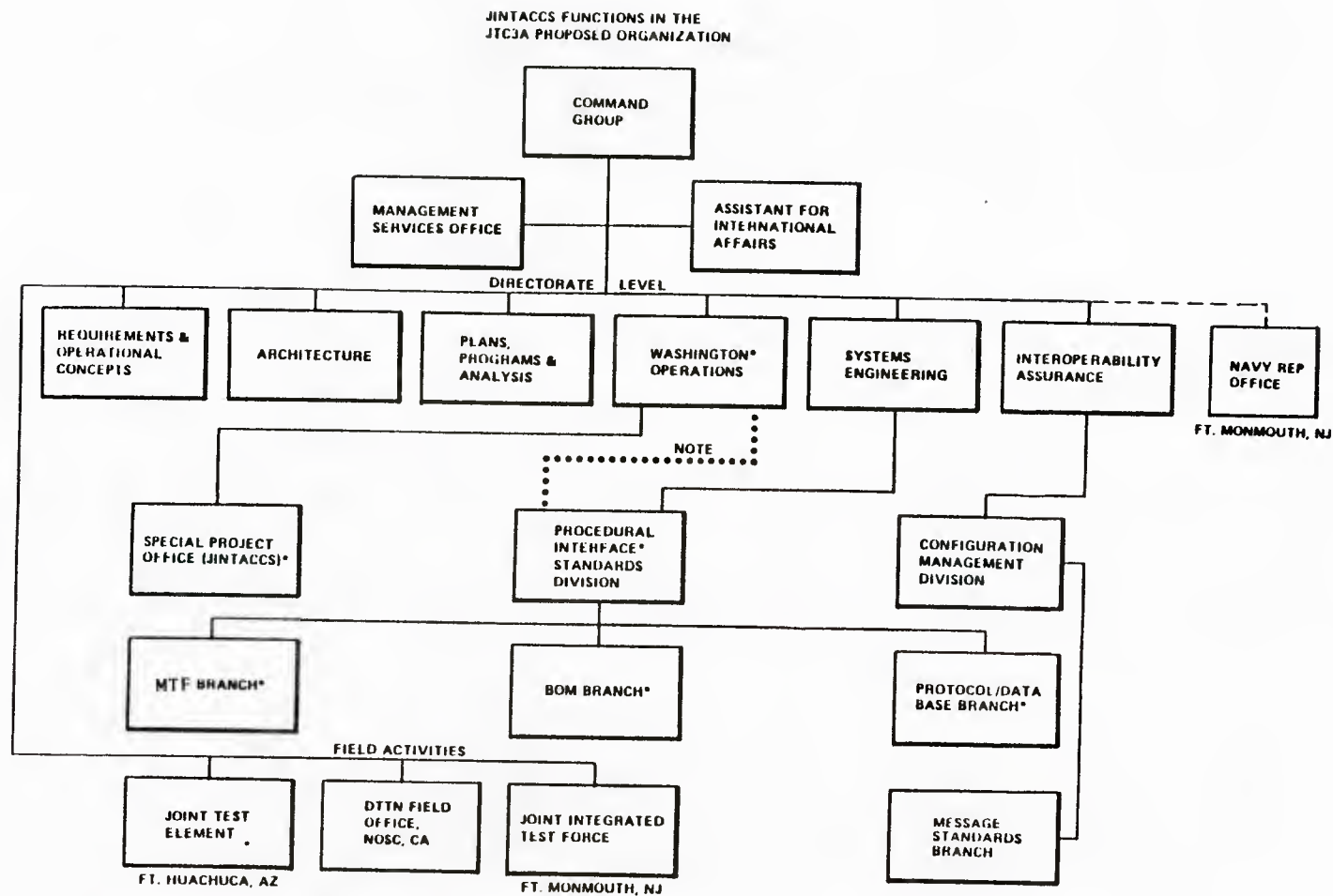


Figure 2-1. JINTACCS Functions in the JTC3A Proposed Organization



Offices (JSARO). JTC3A will provide administrative and funding support to the Service/Agency Representative Offices for JINTACCS activities that support the JTC3A requirements as established by the Memorandum of Understanding. Services and Agencies will fund their representatives' needs that are Service/Agency directed or unique. The senior member of each Service/Agency Representative Office will formally represent his Service/Agency to the JTC3A in matters relating to DC and CM testing.

2.1.2 NAVY JINTACCS ORGANIZATIONAL RELATIONSHIPS. The principal Navy organizations involved in the JINTACCS program are depicted in Figure 2-2. The Navy JINTACCS management organization is shown in Figure 2-3. The organization is summarized as follows:

a. The Chief of Naval Operations is tasked with overall responsibility for the conduct of the Navy JINTACCS Program. He will ensure that the Navy's responsibilities in achieving the JINTACCS objectives are met in consonance with the requirements of the fleet for integrated tactical command and control systems. The achievement of these objectives requires close coordination among the Services and active participation by the Navy representatives to the JINTACCS committees and working groups. Lists of the names, addresses and telephone numbers of the designated Navy representatives will be promulgated separately by the Navy JINTACCS Program Manager.

b. The CNO has designated OP-942 as the Navy JINTACCS Program Sponsor and the OPNAV point of contact for JINTACCS. OP-986D functions as the coordinator for JINTACCS RDT&E funding. The CNO will be supported by the Navy Tactical Interoperability Support Activity (NTISA) in all portions of the Navy JINTACCS Program, and will be assisted by the Navy JINTACCS Steering Committee in providing direction and support to the Navy JINTACCS Program. The Navy representative to the JINTACCS Service/Agency Support Office (NJSASO) is assigned to OP-942G. The Navy representative to the Joint Service/Agency Representative Office (NJSARO) will report to OP-942.

c. The Steering Committee chaired by the Navy JINTACCS Program Sponsor (OP-942) and including representation from the Fleet Commanders, will assist the CNO in establishing policy and guidance designed to ensure that the conduct of the Navy JINTACCS Program adheres to fleet requirements.

d. The designated Navy JINTACCS Program Manager will be Space and Naval Warfare Systems Command (S&NWSYSCOM 06, formerly ELEX 06). The TADIL J Program Director will be Space and Naval Warfare Systems Command (S&NWSYSCOM 109). JINTACCS tests will be supported by designated activities. When the developmental programs (MTF and TADIL J) shift to an operational status, JINTACCS Program Manager functions will be subsumed by the operational configuration management process of the Operational and Technical TADIL Standards Groups (OTSG/TTSG).

e. These organizations and their responsibilities are described in the following paragraphs.

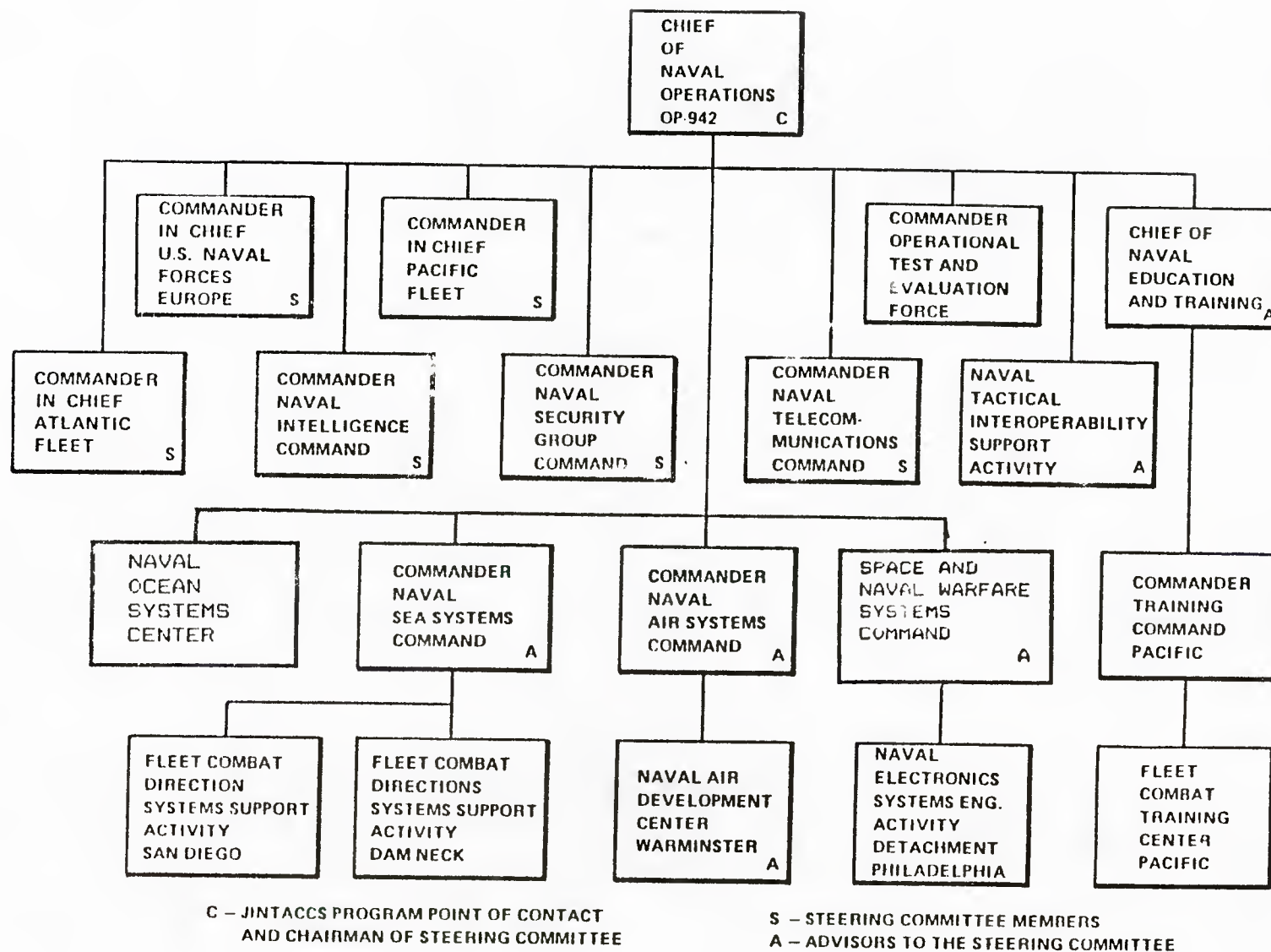
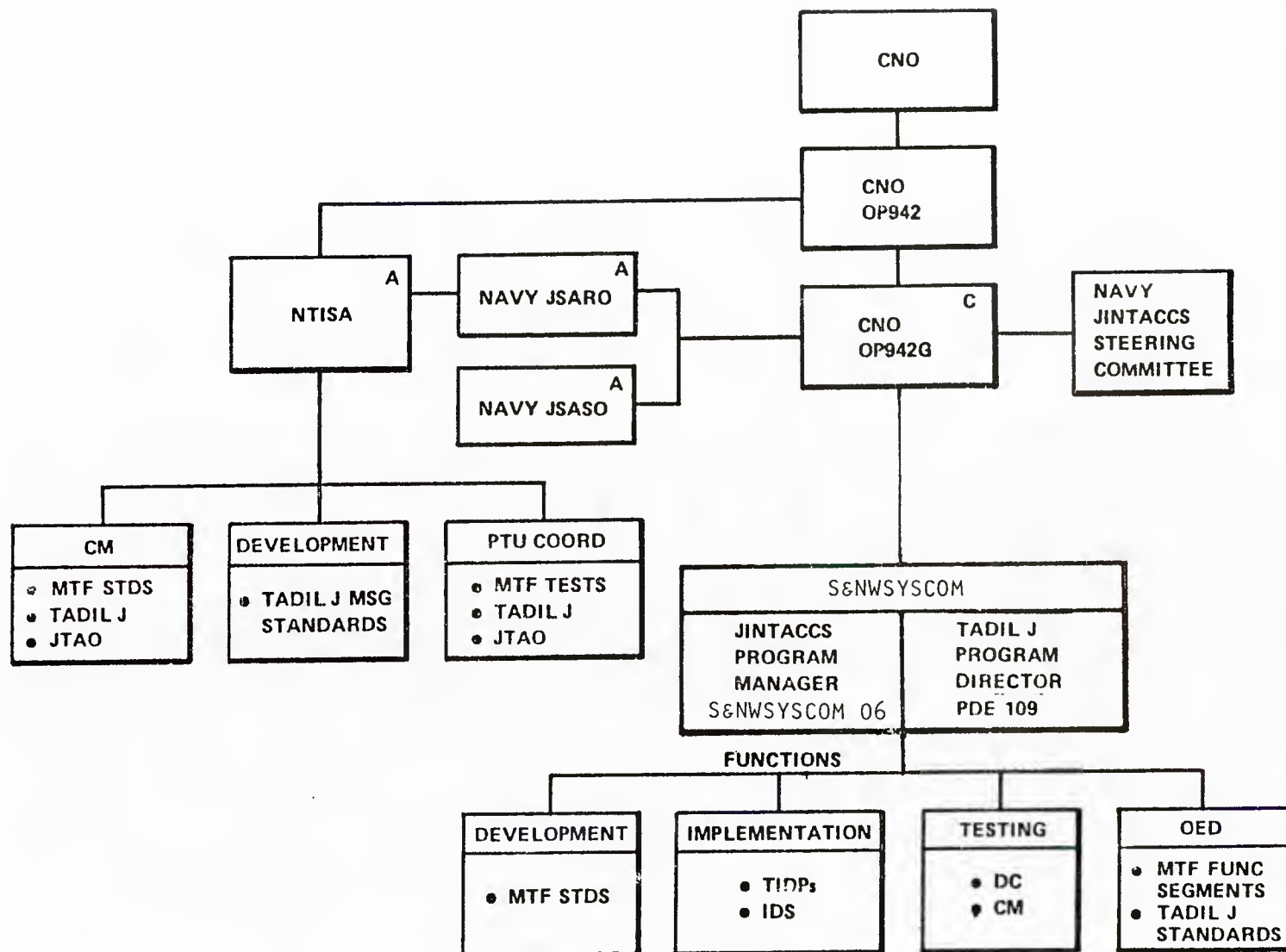


Figure 2-2. U.S. Navy Organizations Involved in the JINTACCS Program



C – CHAIRMAN OF STEERING COMMITTEE  
 S – STEERING COMMITTEE MEMBERS  
 A – ADVISORS TO STEERING COMMITTEE

Figure 2-3. Navy JINTACCS Management Organization, Functional Responsibilities

2.1.2.1 CHIEF OF NAVAL OPERATIONS (CNO). The Chief of Naval Operations (CNO) will be responsible for the overall conduct of the Navy participation in the JINTACCS program.

a. JCS SM 750-82, Appendix A tasked CNO to:

(1) Designate the office responsible for accomplishment of this program as a point of contact for the JTC3A;

(2) Prepare, execute and document program plans;

(3) Identify, program, budget, and provide resources (funds and personnel) to support the joint organization of JINTACCS in accordance with program directives;

(4) Identify, program, budget, and provide resources (funds and personnel) to accomplish the Navy's portion of the program, and to implement jointly approved standards;

(5) Provide representation to the JSASO and JSARO.

b. The JINTACCS Management Plan (JMP) further identifies the resources which the CNO will provide:

(1) Personnel staffing for JINTACCS Program Management

(2) Personnel staffing for Navy Representative Office, JTC3A, Ft. Monmouth, NJ

(3) Navy Test Unit Support

(4) Equipment and System modification to meet JINTACCS Interface Standards

(5) Communications and communication equipment at the Navy test sites.

2.1.2.2 DIRECTOR, COMMAND AND CONTROL SUPPORT SYSTEMS DIVISION. Within the office of the Chief of Naval Operations, OP-942 has been designated the Navy JINTACCS Sponsor and the OPNAV JINTACCS point of contact. He will represent the CNO to ensure that the JINTACCS Program objectives are achieved. OP-942 has the following specific tasks relative to the overall Program management:

a. Issue instructions for implementing JINTACCS management plans, including specific funding responsibilities for all phases of the Navy JINTACCS Program (applicable MTF Functional segments, TADIL J, and JTAO TADIL A and B)

b. Direct the development of Navy JINTACCS technical and test documentation

c. Coordinate duties and responsibilities of the Navy JSASO

d. Direct the conduct of a coordinated development and test program in accordance with the approved program plan, TICs, TIDPs (Test Editions) and interface program



e. Identify program funds required for the accomplishment of all phases of the Navy JINTACCS Program

f. Act as the Navy JINTACCS Program configuration authority

g. Establish general schedules for all phases of the Navy program, conforming to those established by the JINTACCS Program Director

h. Ensure that interface requirements are considered and solutions to conflicts are actively pursued

i. Ensure that required interface documentation is prepared, coordinated, approved, and published

j. Monitor the overall progress of the Navy JINTACCS Program participation

k. Chair the Steering Committee and schedule meetings as required.

2.1.2.3 NAVY TACTICAL INTEROPERABILITY SUPPORT ACTIVITY (NTISA). NTISA will provide technical support to CNO to establish Navy tactical data systems interoperability criteria, develop interface design standards, certify interoperability of Navy tactical data systems, perform required data link message support functions, and perform such other interoperability functions or tasks as may be directed by the CNO. NTISA will support the CNO in all three portions of the JINTACCS program - MTF, TADIL J, and JTAO TADIL A.

a. NTISA will be the primary U.S. Navy activity responsible for planning and technical support of CNO in establishing and maintaining joint and international interoperability, and interoperability among U.S. Navy tactical data systems. This responsibility includes:

(1) Specification of data exchange requirements;

(2) Configuration control of Navy interoperability documentation, data formats and message standards;

(3) Certification of tactical data systems interoperability.

b. JINTACCS support will be provided by NTISA through the CNO (OP-942). Under this plan NTISA will:

(1) Develop operational specifications which fulfill JINTACCS and Navy interoperability requirements;

(2) With the support of the Program Manager and the Navy PTUs, certify that Navy systems are ready to enter joint testing and ready for the OED;

(3) Provide representation to committees and working groups as related to the NTISA mission;

(4) Ensure that Navy interoperability is developed and maintained in accordance with established standards;

(5) Coordinate the activities of the Navy Participating Test Units (NPTUs).

2.1.2.4 STEERING COMMITTEE. The Steering Committee is a formal group chaired by OP-942 with membership composed of representatives from CINCLANTFLT, CINCPACFLT, CINCUSNAVEUR, COMNAVSECGRU, COMNAVINTCOM, COMNAV-TELCOM, and the Navy JINTACCS Program Manager. Representatives of COMNAV-AIRSYSCOM, COMNAVSEASYSYSCOM, S&NWSYSCOM, COMNAVDAC, CNET, NTISA, the Navy JSASO, and the Navy JSARO attend Steering Committee meetings in an advisory capacity. The purpose of the committee is to assist the CNO in establishing policy affecting the direction of JINTACCS and to provide a means for coordinating and resolving major problems which require CNO and FLT CINC level attention. The responsibilities of the Steering Committee will be to:

- a. Assist OP-942 in ensuring that the Technical Interface Concepts (TICs), Technical Interface Design Plans (TIDPs), and Test Plans meet the requirements of the program and are consistent with fleet requirements;
- b. Assist OP-942 as configuration authority to ensure that the program interface objectives are met;
- c. Ensure that the support required from the various Navy commands, other Services, and government activities is provided;
- d. Assist OP-942 by providing high level technical direction and resolutions of technical, operational, and administrative problems;
- e. Task appropriate commands or subcommittees with development of Navy documentation to provide effective support of the JINTACCS Program by the Navy;
- f. Monitor the status of the program in accordance with approved general schedules.

2.1.2.4.1 FLEET COMMANDERS IN CHIEF. The Commander in Chief, Pacific Fleet (CINCPACFLT), the Commander in Chief U.S. Navy Europe (CINCUSNAVEUR), and the Commander in Chief, Atlantic Fleet (CINCLANTFLT), will submit operational requirements for tactical data systems to the CNO. CINCLANTFLT, as the Navy component of Commander in Chief, Atlantic (CINCLANT), will provide the Navy units participating in the JINTACCS OEDs.

2.1.2.4.2 COMMANDER, OPERATIONAL TEST AND EVALUATION FORCE (COMOP-TEVFOR). COMOPTEVFOR will provide advisory support and assistance to the CNO.

2.1.2.4.3 CHIEF OF NAVAL EDUCATION AND TRAINING (CNET). CNET will provide training assets and support for the JINTACCS program, as required, to assist the CNO in implementing the tasks assigned by the JCS.

2.1.2.4.3.1 COMMANDER, TRAINING COMMAND, PACIFIC (COMTRAPAC). COMTRAPAC will provide assistance and support, as required, to support the program.

2.1.2.4.3.1.1 FLEET COMBAT TRAINING CENTER, PACIFIC (FCTCPAC). FCTCPAC will provide training, assistance and support, as required, for the accomplishment of the Navy's responsibilities in the program.

2.1.2.4.4 COMMANDER, NAVAL INTELLIGENCE COMMAND (COMNAVINTCOM). COMNAVINTCOM will provide operational and technical assistance, as required, in carrying out the Navy's responsibilities in the program.

2.1.2.4.5 COMMANDER, NAVAL SECURITY GROUP COMMAND (COMNAVSECGRU). COMNAVSECGRU will provide communication security support to the Navy and Marine Corps organizations involved in the JINTACCS program. Additionally, he provides participating Navy and Marine Corps organizations with advice and assistance concerning cryptologic-related matters regarding plans, programs, logistics, personnel, and research and development activities for JINTACCS development.

2.1.2.4.6 COMMANDER, NAVAL TELECOMMUNICATIONS COMMAND (COMNAVTELCOM). COMNAVTELCOM will provide operational and technical assistance, as required, in carrying out the Navy's responsibilities in the program.

2.1.2.5 NAVY JINTACCS SERVICE/AGENCY SUPPORT OFFICE (JSASO). The Navy JSASO will be the Navy representative to the JINTACCS Program office in Washington, D.C. The JSASO is directly responsible to OP-942 (via OP-942G). The responsibilities of the JSASO will be to:

- a. Ensure Navy support for efficient and timely accomplishment of the program;
- b. Assist in the development, review, coordination, and approval of joint program documentation;
- c. Keep appropriate Navy organizations/activities informed of JINTACCS activities;
- d. Assist in ensuring timely introduction of Navy technical and operational requirements to the JINTACCS Program;
- e. Assist in performing configuration management functions as outlined in the Navy Configuration Management Plan;
- f. Provide Navy inputs to the JTC3A (WOD) office during the development of JINTACCS Program positions for NATO tactical command, control, and communications standards concerning compatibility and interoperability of tactical command and control systems and facilities.

2.1.2.6 NAVY REPRESENTATIVE OFFICE. The Navy Representative Office's primary responsibility will be to facilitate the participation of the Navy in JINTACCS testing. The Navy Representative Office will be collocated with the JITF at Ft. Monmouth, NJ, and is directly responsible to OP-942 via OP-942G for NJSARO tasks defined in Joint Management Plans, and to OP-942 via NTISA for tasks associated with program and technical matters relating to configuration management and testing. Responsibilities of the Navy Representative Office will be to:

- a. Represent the Navy in JITF test matters and act as primary point of contact between Navy/NTISA and JTC3A for test activities;
- b. Advise the JTC3A Commander on Navy problems or changes that could affect JINTACCS testing;
- c. Make appropriate test program recommendations to the JTC3A Commander, the Navy JINTACCS Program Sponsor, Program Manager, and JSASO;
- d. Represent the Navy in joint resolution of Developmental Certification test issues;



e. Ensure Navy testing requirements are provided to the JINTACCS program office;

f. Assist in the development, review, coordination, and approval of joint test program documentation.

2.1.2.7 NAVY JINTACCS PROGRAM MANAGER. The Navy JINTACCS Program Manager is responsible to the Navy JINTACCS Sponsor for the overall conduct of the Navy participation in the integration test and evaluation of JINTACCS. Responsibilities of the Navy JINTACCS Program Manager are to:

a. Establish Navy JINTACCS Program milestones consistent with the approved JINTACCS Program schedule, and monitor program activities to ensure that these milestones are met;

b. Maintain cognizance of the program; assess and evaluate program progress on a regular basis to ensure necessary reaction to program changes; recommend redirection and correction of Navy efforts, as required;

c. Serve on the Navy JINTACCS Steering Committee and act as the administrative coordinator for the subcommittees;

d. Establish procedures which permit early problem identification and timely corrective action;

e. Prepare and maintain a Navy JINTACCS Program Technical Assessments Document to facilitate program management actions;

f. Coordinate planning, programming, and budgeting for Five Year Defense Development Plan (FYDP);

g. Establish and maintain coordination with appropriate Navy organizations and activities on JINTACCS related matters;

h. Prepare reports to be submitted to the OPNAV Program sponsor;

i. Advise the JSASO, JSARO, NTISA, and JINTACCS Program Sponsor regarding program status and make recommendations on matters that affect the Navy JINTACCS Program;

j. Provide budget (S&NWSYSCOM, OPNAV, SECNAV, OSD, Congressional) reviews or assistance, as required, on Navy JINTACCS related matters;

k. Review funding requirements submitted by Navy organizations to complete program tasks;

l. Coordinate the allocation of funds necessary to accomplish Navy JINTACCS testing and OED support;

m. Accomplish procurement processing activities as required;

n. Advise the Program Sponsor and others concerned of reprogramming and funding allocations which are necessary to effect program decisions, schedule changes or alter program objectives/milestones;



- o. Participate in the selection of Navy PTUs;
- p. Carry out other JINTACCS responsibilities assigned by CNO.

2.1.2.7.1 NAVY JINTACCS PROGRAM MANAGER FOR MTF. Space and Naval Warfare Systems Command (S&NWSYSCOM 06) is the Navy JINTACCS Program Manager for MTF.

2.1.2.7.2 NAVY JINTACCS PROGRAM MANAGER FOR TADIL J. Space and Naval Warfare Systems Command (S&NWSYSCOM 109) is the Navy JINTACCS Program Director for TADIL J.

2.1.2.8 SYSTEMS COMMANDS/PRINCIPAL DEVELOPMENT ACTIVITIES. The Systems Commands/Principal Development Activities (PDAs) participating in the Navy JINTACCS Program will provide technical and logistics support for those portions of the program over which they have cognizance. The responsibilities of the Systems Commands/Principal Development Activities are to:

- a. Designate the points of contact for preparation, coordination, and review of documentation; and designate representatives to boards, committees, and working groups established in accordance with approved plans;
- b. Participate in the preparation and coordination of Navy JINTACCS Program documentation;
- c. Designate a test coordinator for participating systems;
- d. Submit a proposed implementation plan for each system participating in the program. Each plan will include the support planned for the interface program, including individual system and subsystem testing, schedules, documentation, and personnel;
- e. Identify, program, and budget the resources necessary to accomplish the portion of the program being sponsored. System development plans will include provision of a system for testing in a suitable test site;
- f. Implement the JINTACCS TIDP, JTIDS TIDP and JTAO IDS/IDH into designated Navy systems. The implementation will include systems engineering, equipment design, analysis, and integration of existing and developing systems.

2.1.2.8.1 COMMANDER, NAVAL AIR SYSTEMS COMMAND (COMNAVAIRSYSCOM). COMNAVAIRSYSCOM provides technical and material support for the Navy equipments and systems participating in the program, as required. Naval Air Development Center (NAVAIRDEVCEN), Warminster, provides technical and material support for the Navy P3 and S3 systems.

2.1.2.8.2 SPACE AND NAVAL WARFARE SYSTEMS COMMAND (S&NWSYSCOM). S&NWSYSCOM provides technical and material support for the Navy equipments and systems participating in the program, as required. Naval Electronic Systems Engineering Activity Detachment (NAVELEXSYSENGACTDET), Philadelphia, is the designated participating test unit for MTF intelligence testing.

2.1.2.8.3 COMMANDER, NAVAL SEA SYSTEMS COMMAND (COMNAVSEASYS COM). COMNAVSEASYS COM provides technical and material support for the Navy equipments and systems participating in the program, as required. Fleet Combat Direction Systems Support Activities (FCDSSAs), San Diego and Dam Neck, design, program, test, deliver, and maintain system software for Navy airborne, surface, and shore based combat direction systems. The FCDSSAs provide technical and material support for the Navy equipment and systems participating in the program, as required. Naval Underwater Systems Center (NUSC) designs, programs, tests, delivers, and maintains system software for Navy subsurface combat direction systems.

2.1.2.9 TADIL STANDARDS GROUPS. The TADIL Standards Groups are representative U.S. Navy bodies which bring together the principal operational and technical commands for deliberation and resolution of configuration management problems and issues relating to data link standards and characteristics. The TADIL Standards Groups include the Operational TADIL Standards Group (OTSG) and the Technical TADIL Standards Group (TTSG). OPNAVINST 9410.3 establishes the OTSG and TTSG and provides the procedures for the conduct of their meetings. OTSG and TTSG functions are described briefly below.

a. Operational TADIL Standards Group (OTSG). The OTSG was established to address operational performance requirements of data link standards. This group, chaired by NTISA for CNO, is composed of representatives from the operating forces (fleet CINC's, numbered fleet commanders, type commanders and fleet training commands). The OTSG provides a forum for discussion of operational and procedural issues and problems. It provides a mechanism for operator inputs into the Tactical C<sup>2</sup> interoperability management structure.

b. Technical TADIL Standards Group (TTSG). The TTSG is the successor to the Technical Standards Group (TSG) established in the early 1960s. It is administered, supported, and chaired by NTISA for CNO, with additional representation from the software development and life-cycle support activities for the various tactical data system programs. The primary task of the TTSG is the development and maintenance of the Operational Specifications (OPSPECs) and Standard Operating Procedures (SOPs) for operational Navy tactical data links (Links 4, 11, and 14). A TTSG JTIDS Message Standards (JMS) has been established to consider TADIL J/Link-16 matters leading to development of essential Navy documentation. Likewise, a TTSG-like organization will be conducted to consider matters affecting Message Text Format (MTF) standards. The OPSPECs and SOPs constitute the formal guidance and direction for the programming activities which develop and produce operational computer programs for U.S. Navy combat direction systems. The TTSG must ensure that the OPSPECs and SOPs are in compliance with joint service and NATO standards. As an integral element of this responsibility, the TTSG also formulates Navy positions and initiatives concerning joint and NATO standards.

2.1.2.10 NAVY PARTICIPATING TEST UNIT (PTU). The term Participating Test Unit refers to the service/agency organization designated to discharge responsibilities in JINTACCS DC and CM testing. This may include provision of representative C<sup>2</sup> elements with supporting tactical C<sup>2</sup> system(s), collocated or remote, plus test-only support and test management. The PTU plans for the personnel, equipment, test tools and facilities necessary to manage, conduct testing, collect and extract data, and perform analysis functions required during DC and CM testing. It is the unit through which each service/agency's operational facilities and systems interface with the JITF for DC test and evaluation purposes. NTISA is responsible for coordination of the several Navy PTUs, which will perform the general, intra-Navy and inter-service tasks indicated in Chapter V of this Plan.

2.2 DEVELOPMENTAL MESSAGE TEXT FORMATS (MTF). The Navy JINTACCS management organization for the Message Text Formats (MTF) portion of the JINTACCS Program is depicted in Figure 2-4.

2.3 DEVELOPMENTAL TADIL J STANDARDS. The Navy JINTACCS management organization for the developmental TADIL J portion of the program is depicted in Figure 2-5.

2.4 OPERATIONAL TADIL A, TADIL B AND TADIL C STANDARDS. The Navy JINTACCS management organization for the operational TADIL portion of the JINTACCS Program is depicted in Figure 2-6.

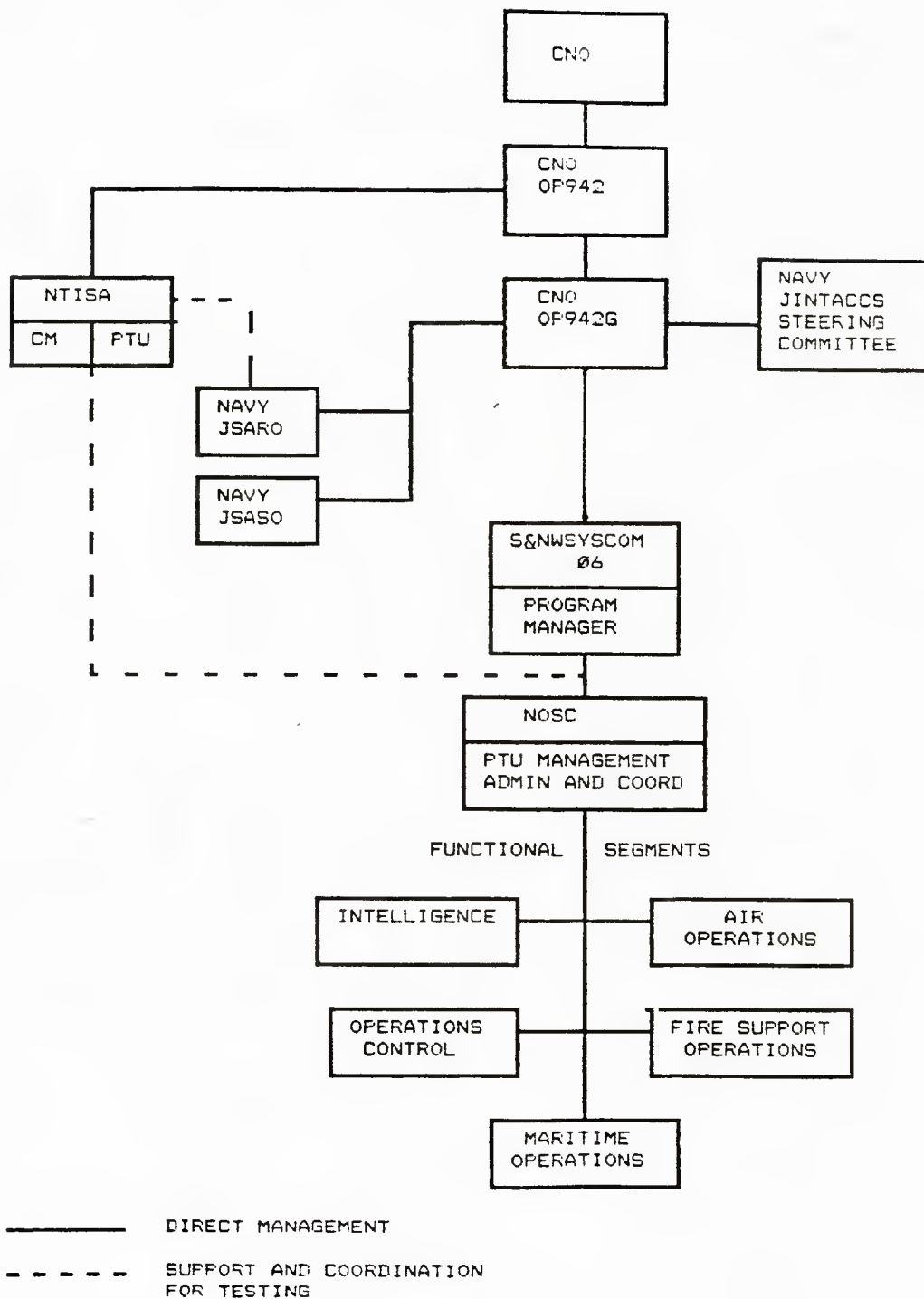


Figure 2-4. Navy JINTACCS Management Organization for MTF.



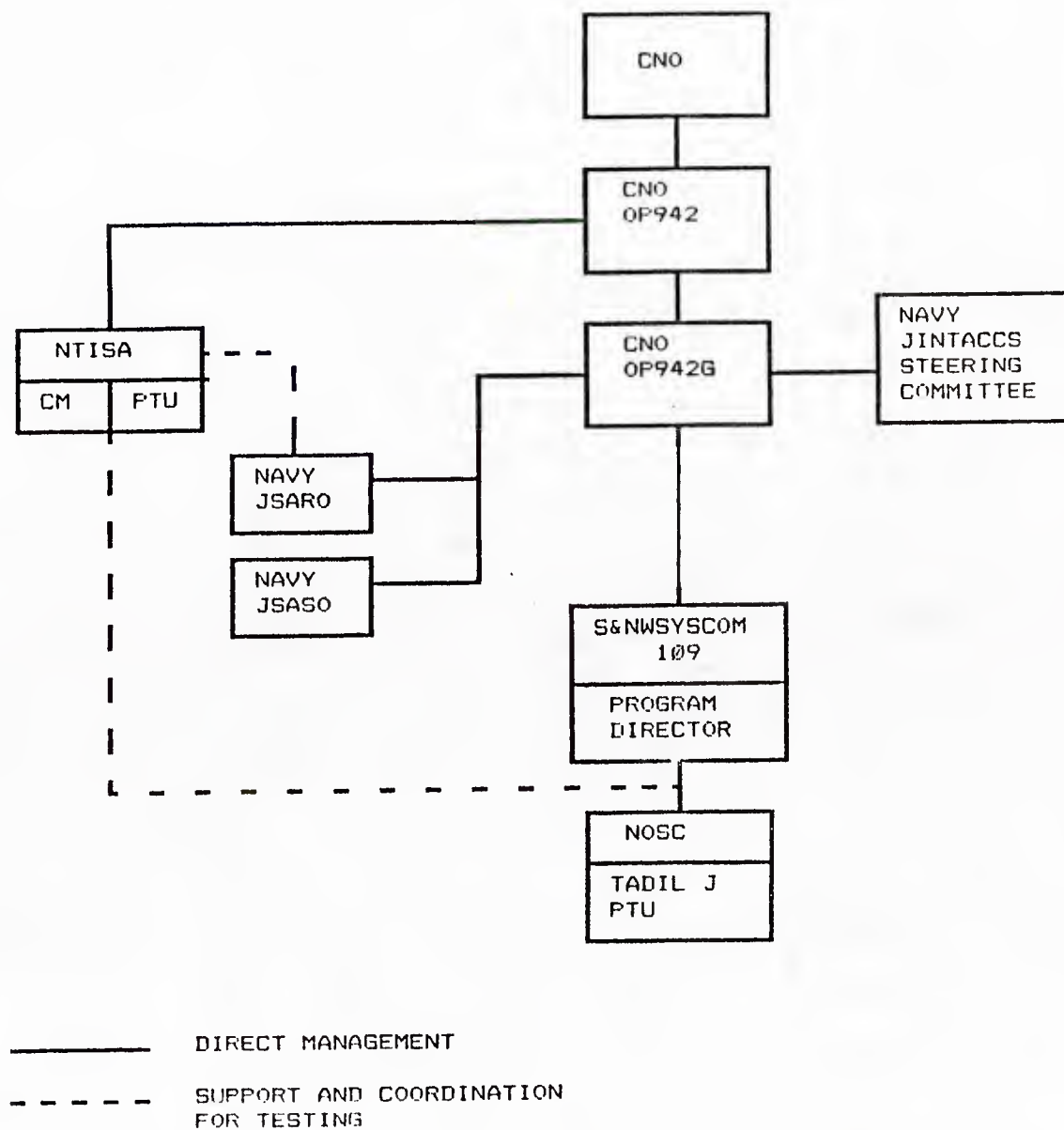


Figure 2-5. Navy JINTACCS Management Organization for TADIL J

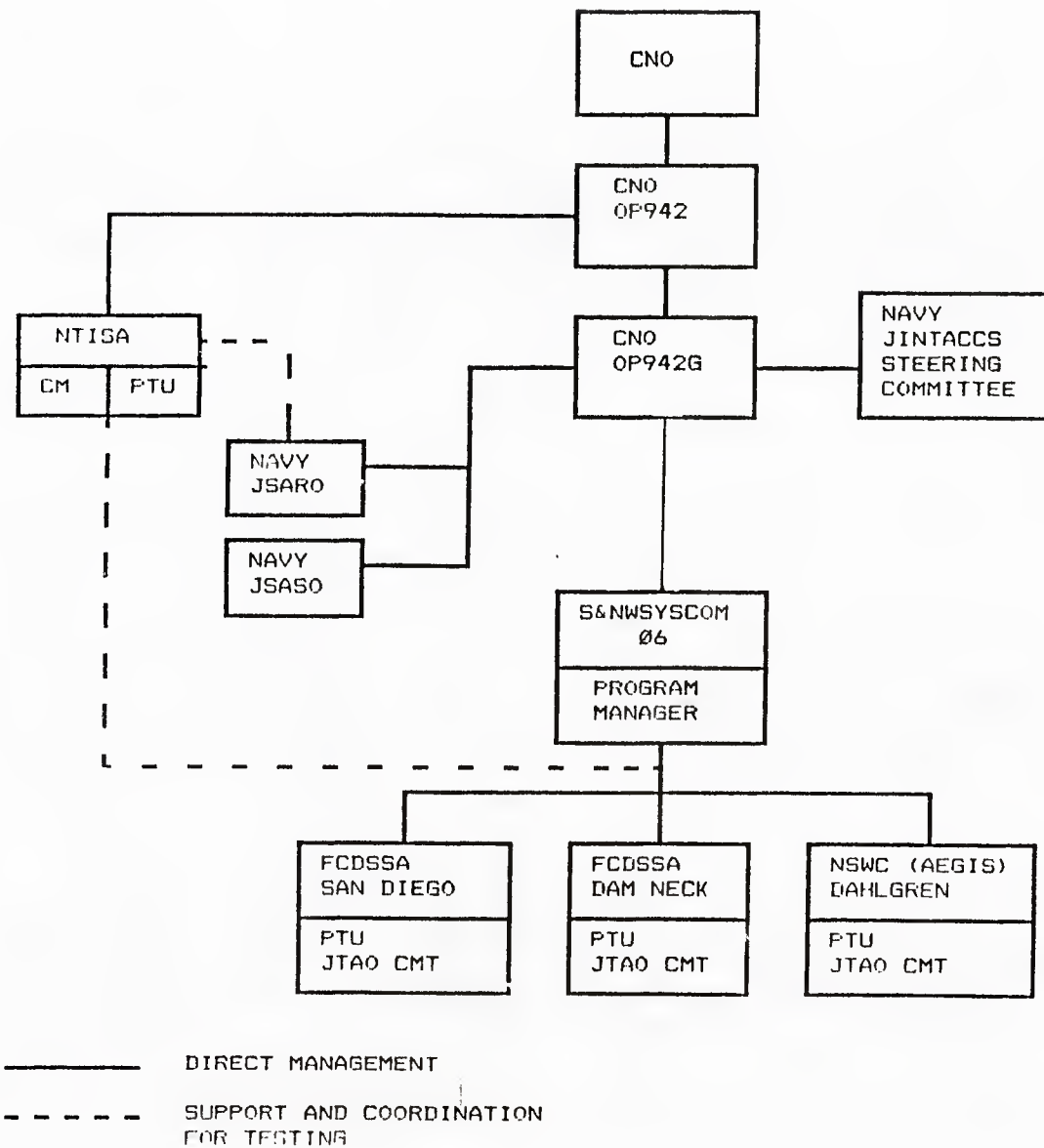


Figure 2-6. Navy JINTACCS Management Organization for JTAO

## CHAPTER III DOCUMENTATION

3. GENERAL. A major part of the JINTACCS Program effort is the preparation, coordination, review, and approval of the JINTACCS Program documentation. In addition to participating in the development and review of JINTACCS Program documentation, the Navy must develop additional planning and implementation documentation to ensure an orderly process of achieving the integration, compatibility, and interoperability of Navy systems participating in the JINTACCS Program. Whereas joint interface documents are under the configuration management of joint configuration control authority, intra-Navy interface level documents will be controlled by Navy configuration control authority, as described in Chapter IV of this Plan.

3.1 JOINT DOCUMENTATION. A list of effective developmental JINTACCS Program documentation and the responsibilities of Navy organizations for those JINTACCS documents are contained in OPNAVINST 9410.2 (series).

3.2 NAVY JINTACCS DOCUMENTATION. In order to ensure an orderly process for achieving the integration, compatibility, and interoperability of Navy systems participating in the JINTACCS Program, a series of implementation and planning documents is required for the various levels of Navy participation in the program. These documents will be separate from, and in addition to, those JINTACCS documents listed in OPNAVINST 9410.2 (series), but will be aligned to and in conformance with those documents to ensure compatibility and interoperability.

a. Navy JINTACCS Program documents consist of:

- (1) SOPs (OPNAVINSTs, NWPs);
- (2) Implementation Plan;
- (3) Concept of Operations (COO);
- (4) Test Plan;
- (5) Configuration Management Plan;
- (6) OED Support Plan; and
- (7) Training Plan.

b. Each document, where appropriate, will separately address MTF, TADIL J, and JTAO TADIL A messages in separate volumes or chapters. Figure 3-1 depicts the required Navy documents in a Navy JINTACCS Program documentation tree. The required documents will expand on the Navy JINTACCS Program Management Plan, to conform with the guidance and direction provided to accomplish the Navy portion of the JINTACCS Program.

c. In some cases required documents will have already been developed and published. For example, Navy JTAO CM procedures are described in part by OPNAVINST 9410.3, which establishes and prescribes procedures for the Operational and Technical TADIL Standards Groups (OTSG and TTSG). In other cases, required

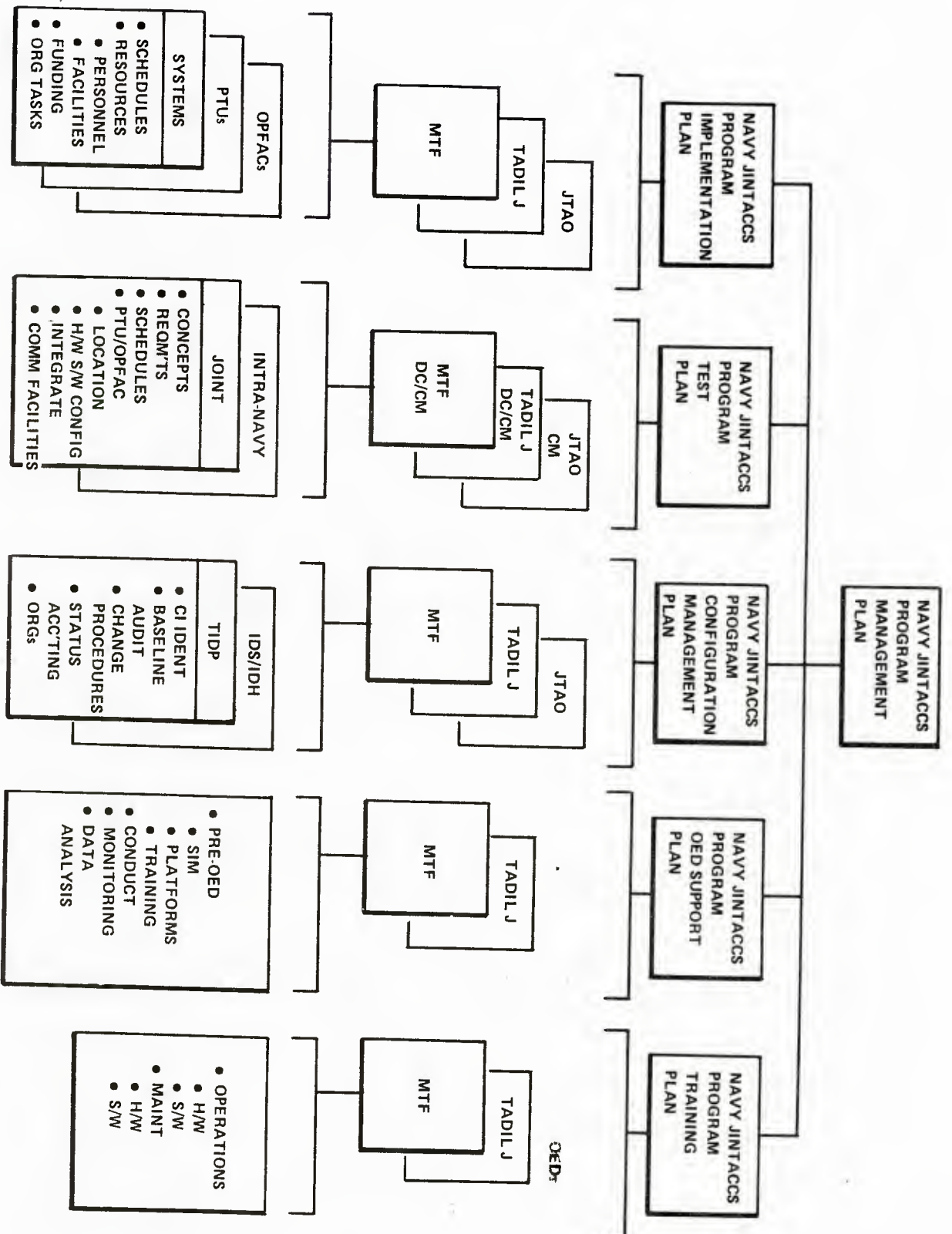


Figure 3-1. Navy JINTACCS Program Documentation Tree



Navy JINTACCS documents will more appropriately be included as part of a larger intra-Navy requirement. For example, planning for Navy support of TADIL J Joint testing may best be addressed in a Navy plan for overall JTIDS/TADIL J testing. Therefore, the organization assigned the responsibility for writing a Navy JINTACCS document will immediately conduct a documentation audit. The audit will cite which documentation already exists and which remains to be done. Where such documentation already exists, the responsible organization will identify to the Navy JINTACCS Program Manager the document(s) and the portion(s) thereof which, in whole or in part, support a specified Navy JINTACCS documentation requirement. The Navy JINTACCS Program Manager will monitor the status of Navy JINTACCS documentation and will publish a list of current documents and documents being developed in a Documentation Status Report to be updated annually.

**3.2.1 NAVY JINTACCS IMPLEMENTATION PLAN.** The Navy JINTACCS Implementation Plan will be the document which defines the Department of the Navy's requirements to accomplish its portion of the OSD/JCS-directed JINTACCS Program. This document will also provide the detailed information regarding Navy schedules, resources, and funding for inclusion in the JINTACCS Program Joint Implementation Plan (JIP). The Navy JINTACCS Implementation Plan will be in accordance with the following guidelines:

a. The Navy JINTACCS Implementation Plan will expand on those JINTACCS schedule milestones that the Navy is required to meet so as to provide accurate progress data and facilitate prompt action to preclude deviations and minimize adverse effects on schedules (Joint and Department of the Navy) and costs. The Implementation Plan will detail the resources, personnel, facilities, and funds the Department of the Navy requires to accomplish its portion of the JINTACCS Program. The approach to implementation will be comprehensive, coordinated, and achieved in a manner time phased with JINTACCS scheduling.

b. The Navy JINTACCS Implementation Plan is the interoperability document that bridges the gap between a system's meeting the Department of the Navy requirements and that system's meeting JINTACCS requirements. It will provide the schedule and identify the necessary resources and funds to modify and test the participating systems, thereby ensuring that the systems meet JINTACCS requirements and are ready to participate in JINTACCS testing/OEDs/joint interface operations.

c. The Implementation Plan will expand on the Navy JINTACCS Program Management Plan to provide specific tasking to Navy organizations, in conformance with the guidance provided in that document, where required for the Navy to accomplish its portion of the JINTACCS Program.

d. The Implementation Plan will identify the systems, PTUs, and C<sup>2</sup> Elements which will implement the JINTACCS Standards. This will include implementation for testing/OEDs/joint operations. The Plan will further specify the level of intra-Navy implementation and will include the implementation of changes to the developmental standards (MTF and TADIL J) as well as operational standards (JTAO TADIL A). The Implementation Plan will clearly distinguish the implementation requirements for MTF, TADIL J, and JTAO TADIL A.

e. The Implementation Plan will specifically include the Message Standards information outlined in the paragraphs which follow:

3.2.1.1 MESSAGE TEXT FORMAT (MTF) STANDARDS. The Joint Chiefs of Staff have mandated Joint implementation of the JINTACCS Message Text Format (MTF) standards on 30 September 1986. The Implementation Plan for MTF will separately address the implementation requirements for each MTF functional segment as well as for the MTF standards considered in total.

3.2.1.1.1 MTF INTERFACE DESIGN STANDARDS. The Interface Design Standard (IDS) to be supported by the MTF Implementation Plan consists of:

a. Jointly approved JINTACCS Interface Operating Procedures (IOP) (to be incorporated in JCS Pub 12, Vol. IV);

b. JINTACCS Technical Interface Design Plan (TIDP) for the Intelligence, Air Operations, Operations Control, Fire Support, and Maritime Operations Segments, (MTF Standards to be incorporated in JCS Pub 25);

c. Supporting documentation, i.e., Message Element Dictionary (MED) and Message Standards Catalog of Keyword Data Sets (CATALOG).

3.2.1.1.2 ASSOCIATED U.S. NAVY JINTACCS DOCUMENTS. The Navy JINTACCS Implementation Plan for MTF will support and refer to the following current Navy JINTACCS documents:

a. OPNAVINST 9410.2 (series), Subj: JINTACCS Message Text Format (MTF) Implementation (reference Annex A.II.9);

b. Naval Warfare Publication (NWP) 10-1 Series documenting JINTACCS MTF Standards, to Support Implementation (reference Annex A.II.11);

c. Navy Concept of Operations (COO) for Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Message Text Formats (reference Annex A.II.10).

3.2.1.2 TADIL J STANDARDS. TADIL J/JTIDS implementation plans will also be developed prior to Joint approval and inclusion in the IDS, to include considerations similar to those outlined above. The TADIL J IDS to be supported by the Implementation Plan consists of:

a. Jointly approved TADIL J Interface Operating Procedures (TJIOP) (to be incorporated in JCS Pub 12, Vol. IV);

b. JTIDS Technical Interface Design Plan (JTIDP) (to be incorporated in JCS Pub 10, Vol. II).

3.2.1.3 JTAO TADIL A MESSAGE STANDARDS. The IDS to be supported by the Implementation Plan consists of:

a. TADIL A Message Standards, JCS Pub 10, Vol. I;

b. Joint Interface Operating Procedures (JIOP), JCS Pub 12, Vol. IV;

c. Complementary Documents:

(1) Interface Design Handbook (IDH) Vols. 1, 2, 3 (Books 1 through 6), and 4;

(2) Data Extraction Reduction Guide (DERG).

**3.2.2 NAVY JINTACCS TEST PLAN.** The Navy JINTACCS Test Plan will provide guidelines for Navy participation in the JINTACCS Test Program. The Test Plan will expand upon the planning guidance contained in Chapter V, Testing, of this document. Planning for Navy support of Joint testing will cover all three phases of Joint testing beginning with Preliminary Service Testing (PST), Developmental Certification Testing (DCT), and concluding with Configuration Management Testing (CMT). Separate subordinate test plans will be developed for each of the test projects for MTF, TADIL A, and TADIL J.

**3.2.2.1 JOINT TESTING.** The Navy JINTACCS Test Plans will identify the Navy Participating Test Units (PTUs) and C<sup>2</sup> Elements, and the system hardware components, software specifications and requirements for each Navy PTU and C<sup>2</sup> Element.

**3.2.2.1.1 OVERALL SUPPORT OF JOINT TESTING.** Specifically, this effort will include:

a. How the Navy PTU hardware will be configured and where it will be located for each functional segment and test configuration;

b. The software necessary to comply with TIDP-TE and accomplish C&I testing, in accordance with JINTACCS Test Plans;

c. The relationship of the test support hardware and software at the Navy PTUs will other PTUs and the JITC;

d. The test communications equipment required for the exchange of the tactical information specified in the TIDP and IDS and that are required for test purposes.

**3.2.2.1.2 INTRA-NAVY MTF TEST PLANS.** The intra-Navy test plans must provide the media for test and checkout of the Navy C<sup>2</sup> Elements/Systems to ensure that they are ready for entry into Joint testing. The intra-Navy MTF Test Plans will provide for testing the compatibility and interoperability of Navy systems applicable to each functional segment.



3.2.2.1.3 INTRA-NAVY TADIL J TEST PLANS. TADIL J/JTIDS test plans will be developed to exercise the full system capability, message standard and terminal, for intra-Navy testing. The plan will:

- a. Validate the terminal design;
- b. Validate the message standard;
- c. Verify the system integration;
- d. Verify system information exchange and network management.

3.2.2.1.4 INTRA-NAVY TADIL A TEST PLANS. The JTAO TADIL A Test Plans will provide for Navy Certification of all Navy Systems by NTISA prior to the system's becoming a candidate for Joint Certification Testing.

3.2.2.1.5 TEST SUPPORT SYSTEM. The test support system to be specified should be one that is available to the PTU. It should contain the interfaces to the C<sup>2</sup> Elements/System as required to inject test scenarios and monitor responses. The test support system should also provide for operations with C<sup>2</sup> Elements/Systems located remotely from each other, e.g., FCDSSA and the NOSC C<sup>3</sup> Site. The test support system should also be available for checkout of the PTU OPFACs/Systems at least 6 months prior to the start of JINTACCS testing.

3.2.3 NAVY JINTACCS CONFIGURATION MANAGEMENT PLAN (NJCMP). The NJCMP will prescribe the processes, procedures, and organizations through which the Navy will support the joint configuration management of the JINTACCS developmental interface baseline standards and the JTAO operational system standards, including the joint operating procedures, as directed by the Joint Chiefs of Staff. The NJCMP will address the following:

- a. The NJCMP will encompass the initiation, processing, analysis, testing, approval, implementation scheduling, status accounting, and administrative procedures necessary to control and maintain the interface message standards baselines.

- b. The NJCMP will be applicable to all Navy organizations which: (1) propose changes to JINTACCS developmental Configuration Items (CIs); (2) propose changes to the JTAO IDS; or (3) are involved in the processing, analysis, evaluation, testing, approval or implementation of such change proposals.

- c. The NJCMP will separately address the CM processes and procedures which will govern the intra-Navy configuration management of: (1) the developmental MTF baseline; (2) the developmental TADIL J baseline; and (3) the operational IDS currently including the JTAO TADIL A operational baseline.

- d. The baselines governed by the NJCMP include message standards, IOPs, related instructions, transmission and forwarding rules, minimum requirements, data element standards, data extraction and reduction formats, and link operating characteristics.



e. The NJCMP will clearly distinguish the CM procedures which govern developmental baselines from those which govern operational baselines.

f. The processes and procedures prescribed in the NJCMP will expand upon and be in conformance with the direction and guidance contained in this chapter and in Chapter IV. The CM Plan will support DOD Directive 5010.19 and DOD-STD-480A.

3.2.3.1 DEVELOPMENTAL MTF CONFIGURATION ITEMS. The JINTACCS configuration items (CIs) which comprise the developmental MTF baselines consist of the following documentation:

- a. The JINTACCS Technical Interface Design Plan — Test Edition (TIDP-TE)
- b. The JINTACCS Message Element Dictionary (MED)
- c. The JINTACCS Message Standard Catalog of Keyword Data Sets (CATALOG)
- d. The JINTACCS Interface Operating Procedures (IOP).

3.2.3.2 DEVELOPMENTAL TADIL J CONFIGURATION ITEMS (CIs). The JINTACCS CIs which comprise the developmental TADIL J baselines consist of the following documentation:

- a. The JTIDS Technical Interface Design Plan — Test Edition (JTIDP-TE)
- b. The TADIL J Interface Operating Procedures (TJIOP).

3.2.3.3 JTAO OPERATIONAL TADIL A CONFIGURATION ITEMS (CIs). The Interface Design Standard/Interface Design Handbook (IDS/IDH) encompasses approved joint operational interface standards. At present, only one standard, the JTAO standard, is approved and in use. The JTAO CIs which comprise the operational TADIL A baselines consist of the following documentation:

- a. JCS Pub 10 , Vol. I — JTAO Message Standards
- b. JCS Pub 12, Vol. IV — JTAO Interface Operating Procedures
- c. IDH — Systems Descriptions, Implementation Codes, Validated Interim Changes
- d. Data Extraction and Reduction Guidelines (DERG).

3.2.4 NAVY JINTACCS OED SUPPORT PLAN. The OED Support Plan describes the required resources (material and personnel), funding, and schedule for Navy support of the JINTACCS OEDs. The OED Support Plan addresses in separate volumes the support required for each MTF functional segment OED. Each volume is modular in construction, to include the following parts:

- a. Part I — Pre-OED Support Plan. Part I includes the nomination of platforms to participate in the OED and all relevant joint and intra-Navy support agreements required.

b. Part II — Pre-OED Training Support Plan. Part II includes all required intra-Navy and joint support agreements which are training-related.

c. Part III — OED Conduct and Monitoring Support Plan. Part III includes the requirements for OED observers as well as data extraction plans and requirements.

d. Part IV — OED Data Analysis Support Plan. Part IV includes plans and requirements for OED analysis, evaluation, and reports.

**3.2.5 NAVY JINTACCS TRAINING PLAN.** The training plan will serve to design, develop, and implement programs to train management, operations, technical, and user personnel in the operation and maintenance of the hardware and software for the JINTACCS Navy systems and PTUs, and for Fleet participation in the OEDs. A similar training program is required for Fleet personnel who will participate in the program on a continuing basis after Joint implementation. Responsibility for training programs rests with the designated PTUs for DC and CM testing, and with the Fleet for OED preparation. The Training Plan will address the following:

a. The training plan will address training requirements for the MTF portion of the JINTACCS Program. Responsibilities for testing, training, and OED training will be clearly distinguished.

b. The training programs should consist of a mix of classroom, hands-on, and self-paced materials designed to meet a variety of requirements and situations. A modular approach is suitable for this effort so trainees can participate, in an orderly manner, in those aspects of the training required for their specific roles in testing and the follow-on OED. Each instructional unit would thus build upon previous units. As many distinctive instructional units as feasible should be identified.

c. The initial thrust of the training effort would be toward preparation of the Navy C<sup>2</sup> Elements/Systems operators to conduct the Intra-Navy test to certify readiness for entry into the Joint Test Program. Following this, upon completion of training, designated personnel would be able to effectively and successfully conduct the C<sup>2</sup> Elements/Systems Test conducted by the JITF-JINTACCS. This should include:

- (1) Ability to operate all the equipment components of the system;
- (2) Ability to operate the system software, including special programs;
- (3) An understanding of the theory of operations of the system and Joint Interface Operating Procedures (JIOPs);
- (4) Ability to provide ongoing system hardware and software maintenance.

**3.3 NAVY JINTACCS DOCUMENTATION RESPONSIBILITIES AND SCHEDULE.** Table 3-1 indicates the responsibilities of Navy organizations for the listed Navy JINTACCS documents in terms of:

a. Writing and Coordinating (W) - Commands indicated by "W" will solicit and compile inputs, draft the document, provide review copies to reviewing organizations, coordinate the review and completion of the document, and provide a final draft to the approving and publishing authority;



Table 3-1. Navy JINTACCS Documentation Responsibilities

[illegible]

LEGEND: W - WRITE & COORDINATE R - REVIEW & COMMENT I - INFORMATION COPY  
S - SUPPLY INPUTS A - APPROVE & PUBLISH

b. Supplying Inputs (S) - Commands indicated by "S" will supply inputs to the writer of the document, as requested by the writer;

c. Reviewing and Commenting (R) - Commands indicated by "R" will review the draft document and provide written comments and recommendations as requested by the writer;

d. Approving and Publishing (A) - The command indicated by "A" will approve and publish the completed document, as appropriate;

e. Receiving an Information Copy (I) - Commands indicated by "I" will receive a copy of the document for information purposes.

**3.3.1 DOCUMENTATION SCHEDULE.** A schedule for the development and production of Navy JINTACCS documentation listed in Table 3-1 will be published by the Navy JINTACCS Program Manager. Upon request of the Program Manager, inputs to the schedule will be provided by the responsible writers, who will also review the schedule. The documentation schedule will support the JINTACCS Program Milestones and Schedules described in Chapter I of this Plan.

**3.3.2 DETAILED RESPONSIBILITIES.** The organization which has been assigned the responsibility for writing (W) a document listed in Table 3-1 may make a more detailed breakdown of the schedule and responsibilities associated with that document. This will be accomplished by listing each volume and part of the document and specifying the schedule and organizational responsibility for each, subject to review and approval of the responsible commands, as indicated in Table 3-1. The detailed schedule must be in alignment and conformance with the schedule described in paragraph 3.3.1, above. Commands listed in Table 3-1 will provide the writer and the publisher of a document with the specific office(s)/code(s) assigned a responsibility for that document, by specific volume and part, if appropriate.



## CHAPTER IV CONFIGURATION MANAGEMENT

4. GENERAL. This chapter sets forth the Navy JINTACCS Configuration Management (CM) concepts, and together with appropriate parts of Chapters I and II, will serve as the basic guidance and direction for the writing of the Navy JINTACCS CM Plan. The Navy organizations participating in the JINTACCS Program and those having cognizance over Navy C<sup>2</sup> Elements/Systems will coordinate the identification, documentation, and reporting of changes to the JINTACCS Program. The Joint CM concept is depicted in Figure 4-1. A Navy Configuration Management Plan will be developed to support the JINTACCS Configuration Management Plan (CMP) (reference Annex A.I.39) and to ensure that Navy configuration issues are coordinated within the Navy prior to being tabled for joint action. The plan will also ensure that Navy planners are kept aware of changes originated by other S/As that will impact Navy C<sup>2</sup> Elements/Systems. Also shown in Figure 4-1 are the links applicable to the Navy systems whose configuration will be impacted by the Joint Configuration Management discipline and collateral systems to those designated by JCS to be interoperable. Collateral systems indirectly serve to support or reinforce the primary systems during Navy, Joint, or combined operations to secure the required performance. These must be considered by the Navy configuration control process when they are impacted by the designs being developed.

4.1 CONFIGURATION MANAGEMENT OVERVIEW. Configuration Management (CM) is a discipline applying technical and administrative direction and surveillance to:

- a. Identify and document the functional and physical characteristics of a configuration item;
- b. Control changes to those characteristics; and
- c. Record and report change processing and implementation status of approved changes. (DOD Directive 5010.19)

4.1.1 JOINT CONFIGURATION MANAGEMENT OVERVIEW. JINTACCS CM is accomplished by a review and approval process conducted and administered by a number of joint and intra-service offices and formal CM groups and processes, identified and described herein. A proposed change to a configuration item may be initiated by any participant in the JINTACCS Program. There are two different formats for JINTACCS interface change proposals: Developmental Interface Change Proposal (DICP) and Operational Interface Change Proposal (OICP). A DICP will be used during the development of a baseline standard and until the baseline has obtained JCS approval. After JCS approval, an OICP will be used. The joint CM procedures for JINTACCS are outlined in the JINTACCS CM Plan and are summarized in the paragraphs which follow.

4.1.1.1 CONFIGURATION MANAGEMENT OF THE DEVELOPMENTAL STANDARDS. JTC3A has approval authority for changes to all developmental JINTACCS configuration items, namely the Technical Interface Design Plan (TIDP) for Message Text Formats (MTF) and the TIDP for TADIL J. JTC3A accomplishes this effort by means of several groups which have been assigned JINTACCS CM responsibilities. They are:

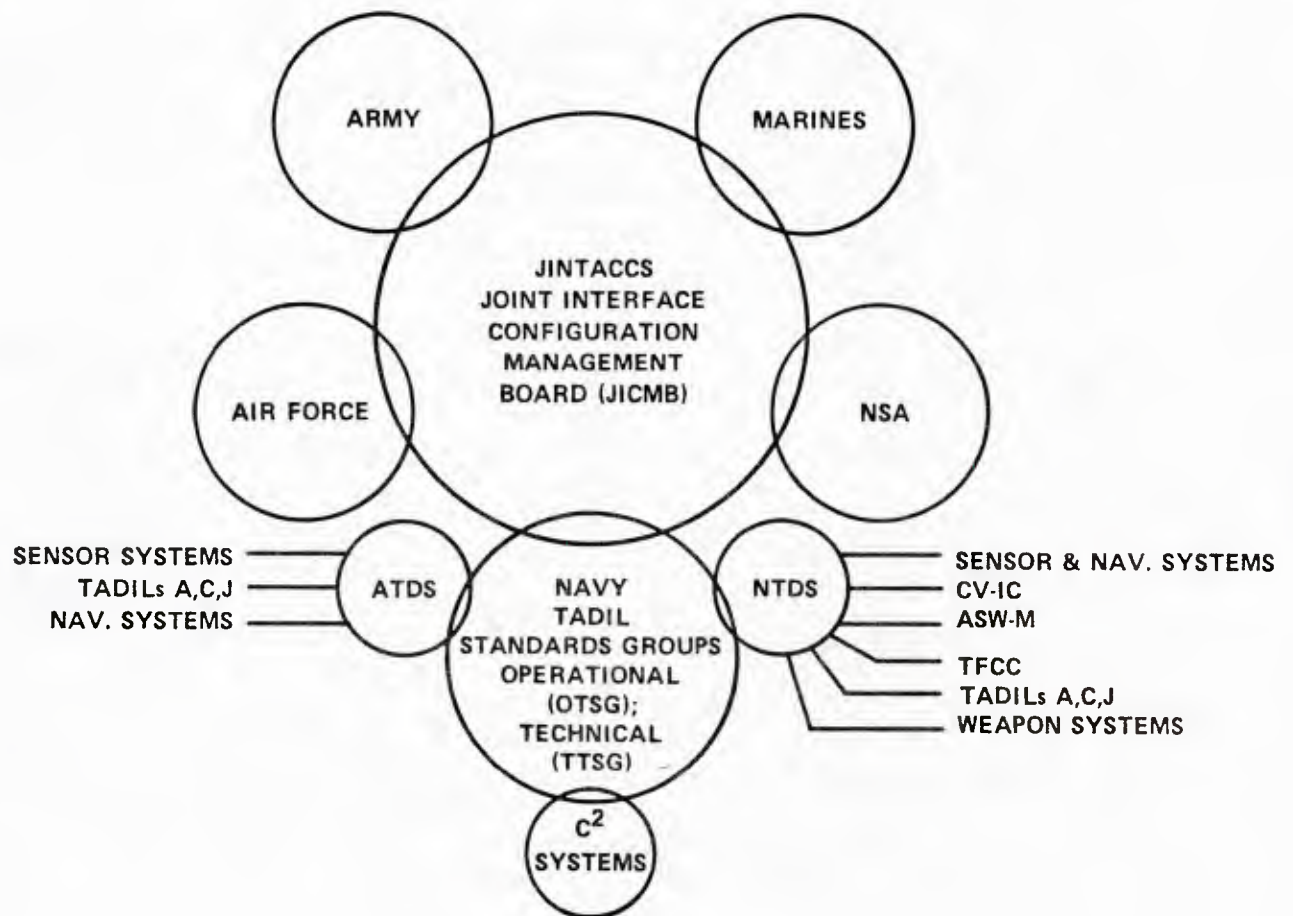


Figure 4-1. JINTACCS Configuration Management Concept, Including Primary and Collateral Navy Systems

4.1.1.1.1 JOINT INTERFACE CONFIGURATION MANAGEMENT BOARD (JICMB). The JICMB consists of a representative from each S/A and reports to the PD. The JICMB is responsible for providing to the PD a consolidated evaluation and recommendation for approval or disapproval of each DICP, including a determination as to whether testing is required, and a recommended implementation date. Separate JICMBs are conducted for MTF and TADIL J DICPs.

4.1.1.1.2 CONFIGURATION MANAGEMENT ANALYSIS GROUP (CMAG). The CMAG reports to the JICMB and is responsible for providing the JICMB with a technical and operational analysis and evaluation of each DICP. Separate CMAGs are conducted for MTF and TADIL J DICPs.

4.1.1.1.3 CONFIGURATION MANAGEMENT DIVISION (CMD). The CMD of the JTC3A, formerly the Configuration Management Element (CME), is responsible for administration of the CM process, status accounting/reporting, documentation updating and distribution, and monitoring the implementation of baseline changes by designated C<sup>2</sup> Elements/Systems. The Message Standards Branch of the CMD is responsible for incorporating changes in the MTF and TADIL J developmental baselines.

4.1.1.2 CONFIGURATION MANAGEMENT OF THE OPERATIONAL STANDARDS. When a TIDP has been successfully tested by DC testing, demonstrated by OED, and approved by JCS, it is considered to be operational and becomes part of the Interface Design Standard (IDS) and the baseline for operational tactical command and control interfaces of all participating Services, Agencies, and C<sup>2</sup> Elements and their tactical data systems. As such, the approval authority for changes to the IDS will reside with the CMS. Accordingly, since the JTAO TADIL A and TADIL B standards have transitioned from developmental to operational, they are documented as part of the IDS and are under CM authority of the CMS. Changes to the JTAO operational baseline are made only through the processing of OICPs under JTAO CM procedures. The JTAO CM procedures generally consist of processing an OICP in order through the Interface Change Control Board (ICCB) and the Command and Control Procedures and Standards Configuration Management Subgroup (CMS). This is done in conjunction with S/A coordination and evaluation of the OICP, and S/A participation/representation in the ICCB and CMS. Intermingled in this process are considerations of the impacts of the OICP on internationally agreed standards, depending on whether the OICP is U.S. originated, or whether the OICP is originated by an Ally for U.S. consideration. Once approved, an OICP is implemented on the specified implementation date by participating S/As.

4.1.1.2.1 CONFIGURATION MANAGEMENT SUBGROUP (CMS). The JCS Command and Control Procedures and Standards Configuration Management Subgroup (CMS) of the Theater Tactical C<sup>3</sup> Panel (T<sup>2</sup>C<sup>3</sup>P) has approval authority for changes to all operational configuration items, and is responsible for the Configuration Management of the IDS. The CMS meets periodically to review the actions of the JTAO Interface Change Control Board (ICCB) and other issues. The CMS is administratively supported by the JINTACCS CMD of the JTC3A.



4.1.1.2.2 JTAO INTERFACE CHANGE CONTROL BOARD (ICCB). The ICCB consists of a representative of each S/A and is chaired by the JTC3A CMD. The ICCB is administratively supported by the JINTACCS CMD of JTC3A. The ICCB conducts a technical review of each JTAO OICP and related technical interface issues and provides a report to the CMS. The report includes:

- a. Status of the OICP (i.e., approved/accepted, approved/accepted as amended, disapproved, continued, or withdrawn);
- b. Rationale for S/A non-concurrence (if any);
- c. Determination of Allied coordination requirements, if appropriate;
- d. Recommendations for testing;
- e. Proposed implementation dates;
- f. Proposed change pages for the JTAO portion of the IDS/IDH for ICCB approved OICPs;
- g. Any additional information deemed necessary to support CMS action on the change proposal.

4.1.1.2.3 JTC3A CMD. The CMD maintains the JTAO IDS/IDH operational baseline, prints and mails copies (and changes thereto) of the baseline, and tracks JTAO OICPs throughout the CM process.

4.1.2 ALLIED INTERACTION IN JINTACCS CONFIGURATION MANAGEMENT. The JINTACCS Program has been directed to consider and reflect U.S./NATO interoperability requirements in the development of JINTACCS standards. In addition, allied agreements, whether bilateral or multilateral, influence the course of JINTACCS message development activities. The S/As are afforded the opportunity to introduce requirements and recommendations during the formulation of national positions on matters of concern to JINTACCS. Similarly, JINTACCS development must be responsive to requirements to implement internationally agreed standards and procedures that have been ratified by the U.S. Additionally, JINTACCS must be responsive to standards being negotiated which are under development and implementation by other nations and officially recognized forums. Once a JINTACCS proposal achieves "NATO agreed status," changes to the standard are no longer a prerogative of S/As alone. JINTACCS DICPs that need NATO coordination shall be coordinated by the JTC3A with the proper U.S. representative through the International Command and Control Interoperability Subgroup (IC2S) of the T<sup>2</sup>C<sup>3</sup>P, prior to JTC3A approval. Allied proposals which would require changes to operational U.S. Standards shall be initiated by U.S. representatives as OICPs and processed under Joint CM Procedures.



4.1.3 NAVY JINTACCS CONFIGURATION MANAGEMENT OVERVIEW. The Configuration Control Authority for the Navy portion of the JINTACCS developmental standards (MTF and TADIL J) and the JTAO operational standards (TADIL A) will be CNO (OP942). Configuration Management will be the responsibility of NTISA, and will be effected through the Operational TADIL Standards Group (OTSG) and the Technical TADIL Standards Group (TTSG), as established and described by OPNAVINST 9410.3 (series). Operational and technical analysis and evaluation of interface change proposals will be provided by the OTSG and TTSG, respectively. In support of JINTACCS, separate TTSGs will be established for MTF, TADIL J, and operational JTAO TADIL A. Results of the OTSG/TTSG are used to establish Navy positions and inputs to Joint and Allied CM committees.

4.1.3.1 TADIL STANDARDS GROUPS. The TADIL Standards Groups are representative U.S. Navy bodies which bring together the principal operational and technical commands for deliberation and resolution of configuration management problems and issues relating to data link standards and characteristics.

4.1.3.1.1 OPERATIONAL TADIL STANDARDS GROUP (OTSG). The OTSG was established to address fleet operational requirements for tactical digital data links. This group is composed of representatives from the operating forces (fleet CINCs, numbered fleet commanders, and type commanders). The OTSG provides a forum for discussion of operational and procedural issues and problems. It provides a mechanism for the injection of experienced based inputs of the user community into Tactical C<sup>2</sup> interoperability management structure. OTSG membership will be as depicted in Figure 4-2.

4.1.3.1.2 TECHNICAL TADIL STANDARDS GROUP (TTSG). The TTSG is comprised of representatives from the software development and life-cycle support activities for the various Navy tactical data system programs. The primary task of the TTSG is the development and maintenance of the Operational Specifications (OPSPECs) for Navy tactical data links. The OPSPECs constitute the formal guidance and direction for the programming activities, which develop and produce operational computer programs for U.S. Navy combat direction systems. The TTSG must ensure that the OPSPECs and SOPs are in compliance with joint service and NATO standards. As an integral element of this responsibility, the TTSG also formulates Navy positions and initiatives concerning joint and NATO standards for introduction in the appropriate standards groups (i.e., T<sup>2</sup>C<sup>3</sup>P Subgroups and ADSIA Working Groups). The TTSG also determines technical accuracy and feasibility of proposed SOP changes prior to OTSG action. Figure 4-3 depicts the TTSG membership and the systems programs which they represent. Separate TTSGs will be established and conducted for each of the following:

4.1.3.1.2.1 TTSG FOR OPERATIONAL MESSAGE STANDARDS (OMS). The TTSG OMS is responsible for the development and maintenance of the Operational Specifications (OPSPECs) for operational Navy tactical data links (TADIL A/Link-11, TADIL C/Link-4, and Link-14). In support of JINTACCS, the TTSG OMS will review, analyze, and evaluate the following:

- a. OICPs to the JTAO IDS/IDH for TADIL A

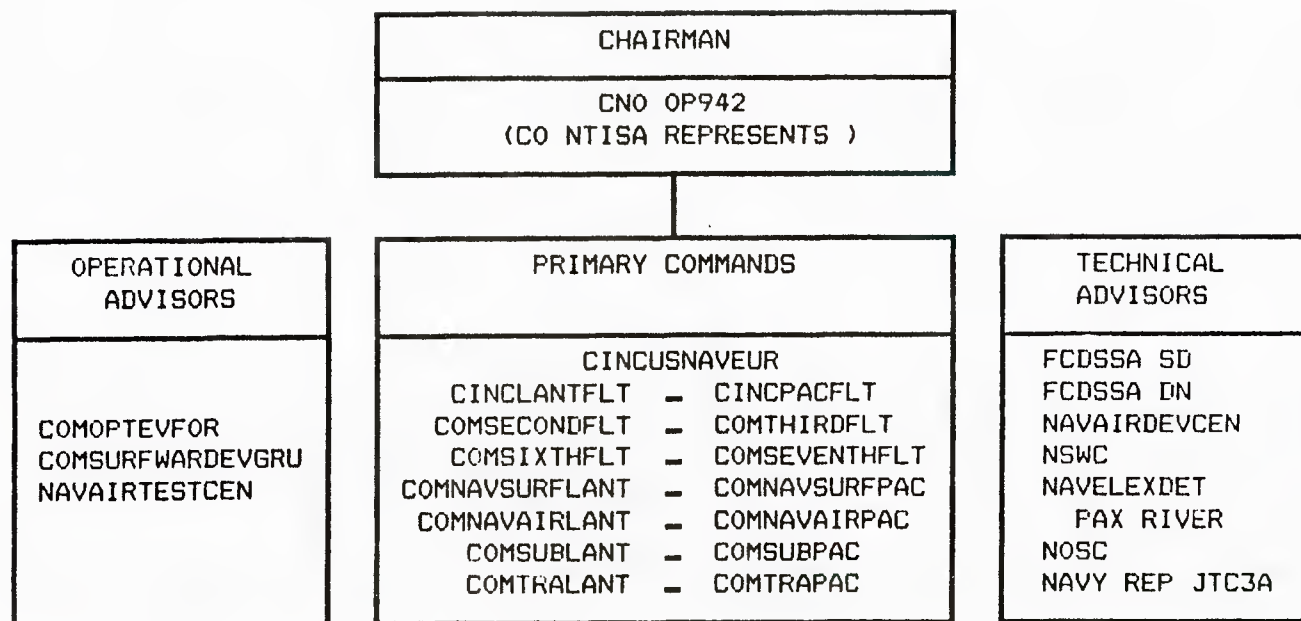


Figure 4-2. Operational TADIL Standards Group (OTSG)

# TTSG MEMBERSHIP

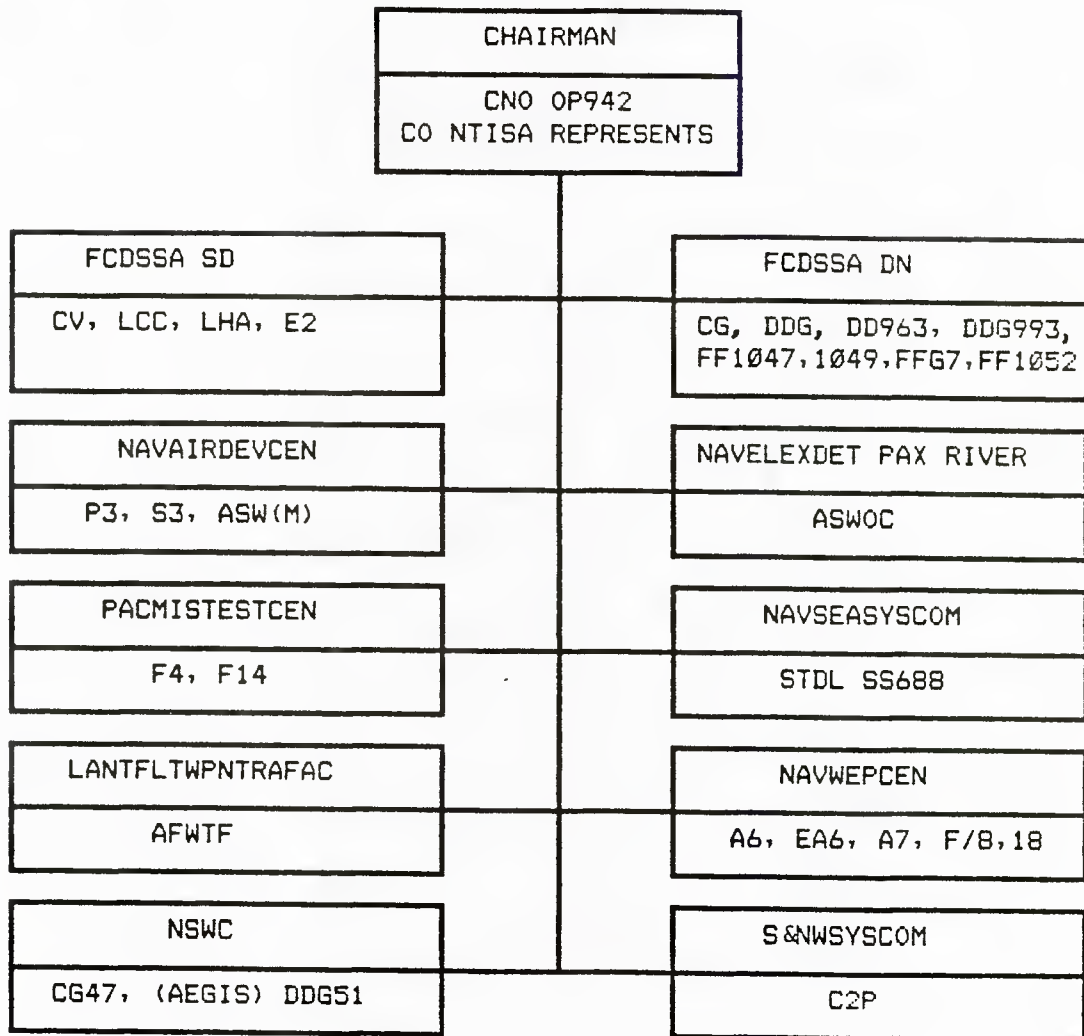


Figure 4-3. Technical TADIL Standards Group (TTSG) Members and the Systems/Programs Which They Represent

- b. U.S. Navy Change Proposals to TADIL A/Link-11
- c. NATO Change Proposals to STANAG 5511 or other Allied Change Proposals to TADIL A.

4.1.3.1.2.2 TTSG FOR MESSAGE TEXT FORMAT STANDARDS (MTF). The TTSG MTF will review, analyze, and evaluate:

- a. DICPs to the MTF TIDP baseline
- b. U.S. Navy Change Proposals which may affect the MTF TIDP baseline
- c. Allied Change Proposals which may affect the MTF TIDP baseline.

4.1.3.1.2.3 TTSG FOR TADIL J MESSAGE STANDARDS (JMS). The TTSG-JMS will review, analyze, and evaluate:

- a. DICPs to the TADIL J TIDP baseline
- b. U.S. Navy Change Proposals which may affect the TADIL J TIDP baseline
- c. Allied Change Proposals which may affect the TADIL J TIDP baseline.

4.1.3.2 NAVY REPRESENTATIVES TO JOINT CM MEETINGS. Navy representatives to the JINTACCS CM Committees are identified as follows:

4.1.3.2.1 JICMB. The Navy representative to the JICMB will be OP-942. The Navy representative will utilize the reports from the TTSG MTF or JMS, as appropriate, as well as the CMAG, in determining the Navy position for JICMB meetings.

4.1.3.2.2 CMAG. The Navy representative to the CMAG will be NTISA. The Navy representative will utilize the reports of the TTSG MTF or JMS, as appropriate, in representing the Navy during CMAG meetings.

4.1.3.2.3 ICCB. The Navy representative to the JTAO ICCB will be NTISA. The Navy representative will utilize the reports of the OTSG and TTSG OMS in representing the Navy during ICCB meetings.

4.2 CONFIGURATION MANAGEMENT OF DEVELOPMENTAL MTF STANDARDS. The JTC3A has approval authority for changes to the developmental Message Text Format (MTF) baselines.

4.2.1 DEVELOPMENTAL MTF BASELINES. The JINTACCS Configuration Items (CIs) which comprise the developmental MTF baselines consist of the following documentation:

- a. The JINTACCS Technical Interface Design Plan — Test Edition (TIDP-TE)
- b. The JINTACCS Message Element Dictionary (MED)
- c. The JINTACCS Message Standard Catalog of Keyword Data Sets (CATALOG)
- d. The JINTACCS Interface Operating Procedures (IOP).



4.2.2 DEVELOPMENTAL MTF CONFIGURATION MANAGEMENT PROCEDURES. Change proposals to the development of MTF baselines may be submitted by any program participant. Most DICPs to the MTF baselines will result from problems identified in the course of testing the standards. Problems discovered during testing will be documented and processed in accordance with the Problem/Trouble Report (PTR) and Joint Analysis Review Panel (JARP) procedures described in the JINTACCS CMP (reference Annex A. I.39). When the need for a DICI is recognized, the JARP will identify an Office of Primary Responsibility (OPR) for DICI preparation, and will specify the desired action for correcting this problem. If a CMAG action is required, NTISA, as the Navy representative to the CMAG, will receive the DICI for action. MTF Change Proposals will be processed as follows:

a. CO NTISA will forward all developmental MTF Change Proposals, including DICPs and Navy proposed changes, to the members of the Technical TADIL Standards Group for MTF Message Standards (TTSG MTF).

b. CO NTISA will publish a report of the results of the TTSG MTF meeting, which will be the basis for further Navy action regarding each Developmental MTF change proposal addressed.

c. If the DICI is an MTF CMAG item, NTISA, as the Navy CMAG representative, will provide required inputs to the MTF CMAG chairman in accordance with JINTACCS CMP and will determine future Navy CMAG action on the DICI based on the results of the TTSG MTF review, analysis, and evaluation.

d. If the developmental MTF change proposal was submitted by a Navy organization and is approved by the TTSG MTFs, an MTF DICI will be prepared by the Naval Electronics Systems Engineering Activity Detachment (NESEADET), Philadelphia, for NTISA review. NTISA will submit the DICI to JTC3A CMO and provide a copy to OP-942G.

e. Once the JTC3A CMD has forwarded an MTF DICI to the JICMB representatives for action, the Navy JICMB representative, (OP-942), will utilize the applicable TTSG MTF report as well as the applicable MTF CMAG report in determining the Navy position with regard to the subject MTF DICI. Organizational relationships involved in the developmental MTF CM process are diagrammed in Figure 4-4.

4.3 CONFIGURATION MANAGEMENT OF DEVELOPMENTAL TADIL J STANDARDS. The JTC3A has approval authority for changes to the developmental TADIL J Bit-Oriented Message (BOM) baselines.

4.3.1 DEVELOPMENTAL TADIL J BASELINES. The JINTACCS Configuration Items (CIs) which comprise the developmental TADIL J baselines consist of the following documentation:

a. The JTIDS Technical Interface Design Plan — Test Edition (TIDP-TE)

b. The TADIL J Interface Operating Procedures (TJIOP).

4.3.2 DEVELOPMENTAL TADIL J CONFIGURATION MANAGEMENT PROCEDURES. Change proposals to the developmental TADIL J baselines may be submitted by any program participant.

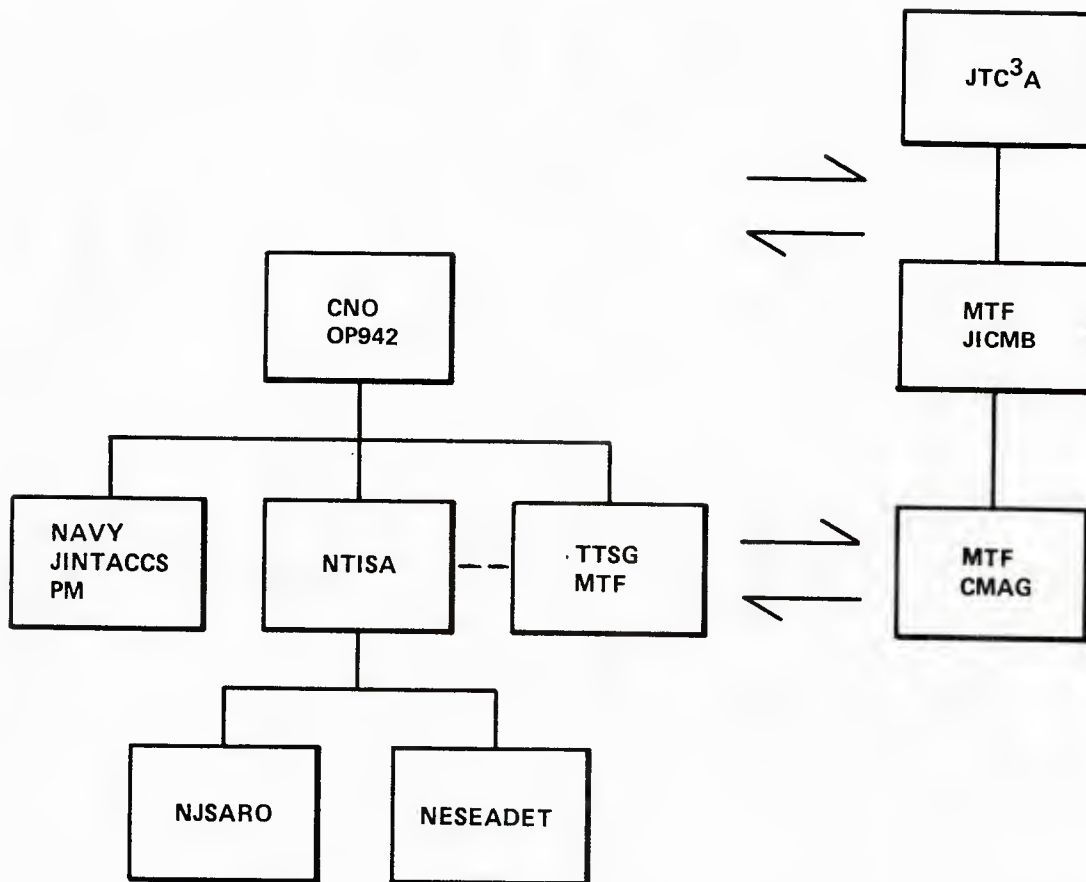


Figure 4-4. Developmental MTF CM

Most DICPs to the TADIL J baseline will result from problems identified in the course of testing the standards. Problems discovered during testing will be documented and processed in accordance with the PTR and JARP procedures (reference Annex A.I.36). When the need for a TADIL J DCP is recognized, the JARP will identify an OPR for TADIL J DCP preparation and will specify the desired action for correcting this problem. If it is determined that a TADIL J CMAG action is required, NTISA, as the Navy representative to the TADIL J CMAG, will receive the TADIL J DCP for action. Developmental TADIL J Change Proposals will be processed as follows:

- a. All developmental TADIL J Change Proposals, and Navy proposed changes, will be forwarded to the members of the Technical TADIL Standards Group, for TADIL J Message Standards (TTSG JMS).
- b. CO NTISA will publish a report of the results of the TTSG JMS meeting, which will be the basis for further Navy action regarding each Developmental TADIL J change proposal addressed.
- c. If the DCP is a TADIL J CMAG item, NTISA, as the Navy CMAG representative, will provide required inputs to the TADIL J CMAG chairman in accordance with JINTACCS CMP (reference Annex A.1.39) and will determine future Navy CMAG action on the DCP to reflect results of the TTSG JMS review, analysis, and evaluation.
- d. If the developmental TADIL J change proposal was submitted by a Navy organization and is approved by the TTSG JMS, a TADIL J DCP will be prepared by NTISA and submitted to the JTC3A CMD, with a copy provided to OP-942.
- e. Once the JTC3A CMD has forwarded a TADIL J DCP to the TADIL J JICMB representatives for action, the Navy JICMB representative (OP-942) will utilize the applicable TTSG JMS report as well as the applicable TADIL J CMAG report in determining the Navy position with regard to the TADIL J subject DCP. Organizational relationships involved in the developmental TADIL J CM Process are diagrammed in Figure 4-5.

4.4 CONFIGURATION MANAGEMENT OF THE OPERATIONAL JTAO TADIL A AND TADIL B STANDARDS. The JCS Command and Control Procedures and Standards Configuration Management Subgroup (CMS) of the T<sup>2</sup>C<sup>3</sup>P has approval authority for changes to the Interface Design Standards and Interface Design Handbook (IDS/IDH). The T<sup>2</sup>C<sup>3</sup>P has tasked the CMS with conducting CM of the IDS/IDH using resources, direction, and coordination provided by the JTC3A. The JTC3A provides the required IDS/IDH CM support using the various JINTACCS organizations within JTC3A. The detailed CM procedures for Operational Standards (IDS/IDH) are prescribed in Annex A. I.37.

4.4.1 OPERATIONAL JTAO TADIL A AND TADIL B BASELINES. The Interface Design Standard/Interface Design Handbook (IDS/IDH) encompasses approved joint operational interface standards. The JTAO CIs which comprise the operational TADIL A and TADIL B baselines consist of the following documentation:

- a. JCS Pub 10, Vol. I — JTAO Message Standards
- b. JCS Pub 12, Vol. IV — JTAO Interface Operating Procedures

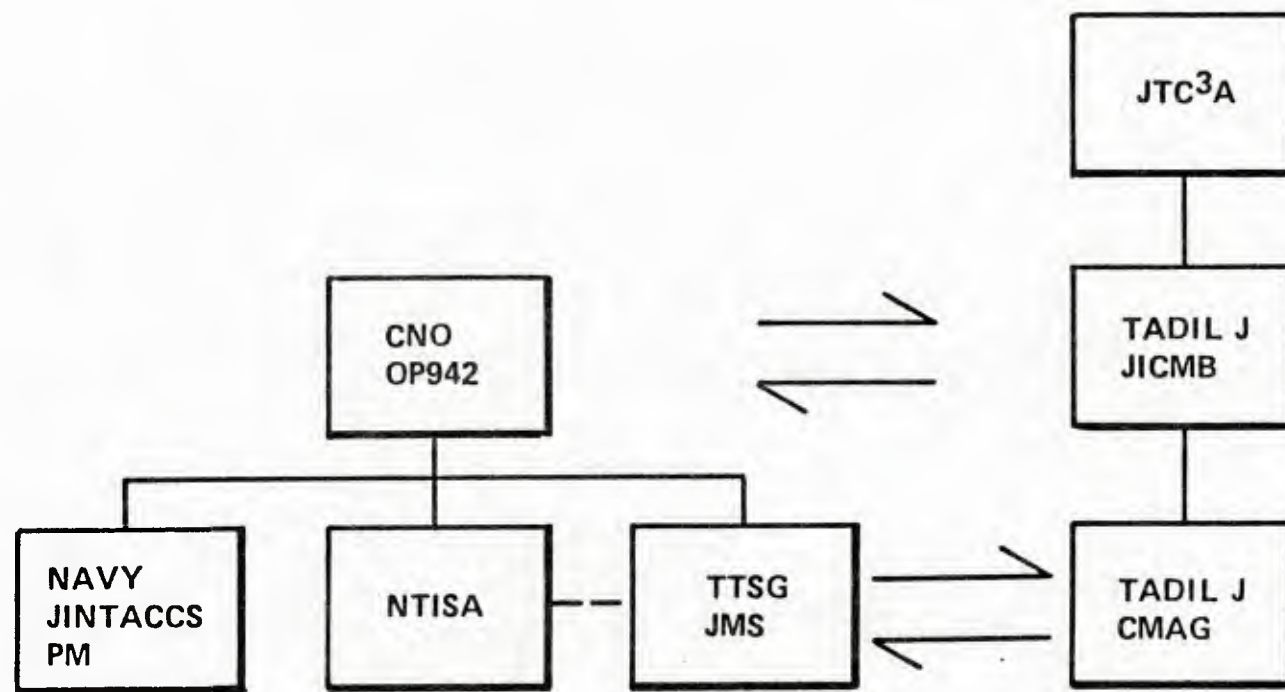


Figure 4-5. Developmental TADIL J CM



c. IDH — Systems Descriptions, Implementation Codes, Validated Interim Changes

d. Data Extraction and Reduction Guidelines (DERG).

**4.4.2 IDS/IDH CONFIGURATION MANAGEMENT PROCEDURES.** The IDS/IDH encompasses approved operational interface standards. At present only one standard, the JTAO TADIL A and TADIL B standard, is approved and in use. As new standards are developed and approved, they will be incorporated in the IDS/IDH and will be configuration managed in a manner similar to that prescribed as the JTAO CM procedures.

**4.4.2.1 MULTIPLE OPERATIONAL STANDARDS.** To facilitate CM of multiple approved operational standards, the Navy JINTACCS CM plan will separately address the CM procedures for each approved operational standard. The procedures will be similar in format to those prescribed for JTAO CM. The Navy JINTACCS CM Plan will include separate sections which address CM of the following standards:

- a. Operational JTAO TADIL A
- b. JINTACCS MTF, when it becomes operational
- c. TADIL J, when it becomes operational.

**4.4.2.2 U.S. NAVY JTAO IDS/IDH CONFIGURATION MANAGEMENT PROCEDURES.** Proposed changes to the JTAO standard may be generated by any service, defense agency, the OJCS, a JCS EA for an interface program, or any unified or specified command. Organizational relationships involved in the operational JTAO CM process are diagrammed in Figure 4-6. Operational TADIL Change Proposals will be processed as follows:

a. All JTAO TADIL A/Link-11 operational baseline changes proposed by Navy commands or activities will be submitted to NTISA, who will in turn, distribute them to the OTSG or TTSG for review, in accordance with the procedures described in OPNAVINST 9410.3 series.

b. If another service has submitted a JTAO Operational Interface Change Proposal (OICP), the JTC3A CMD will distribute the OICP to ICCB members. As the Navy ICCB representative, NTISA will receive OICPs for review, and will in turn, distribute them to the OTSG or TTSG for review, in accordance with OPNAVINST 9410.3 series.

c. CO NTISA will publish a report of the results of the OTSG and TTSG OMS meetings, which will be the basis for further Navy action regarding each JTAO operational change proposal addressed.

d. If the JTAO change proposal is an OICP submitted by another service and distributed by the JTC3A CMD, NTISA, as the Navy representative to the JTAO ICCB, will represent the Navy position on the OICP based on the action taken by the OTSG and TTSG OMS.

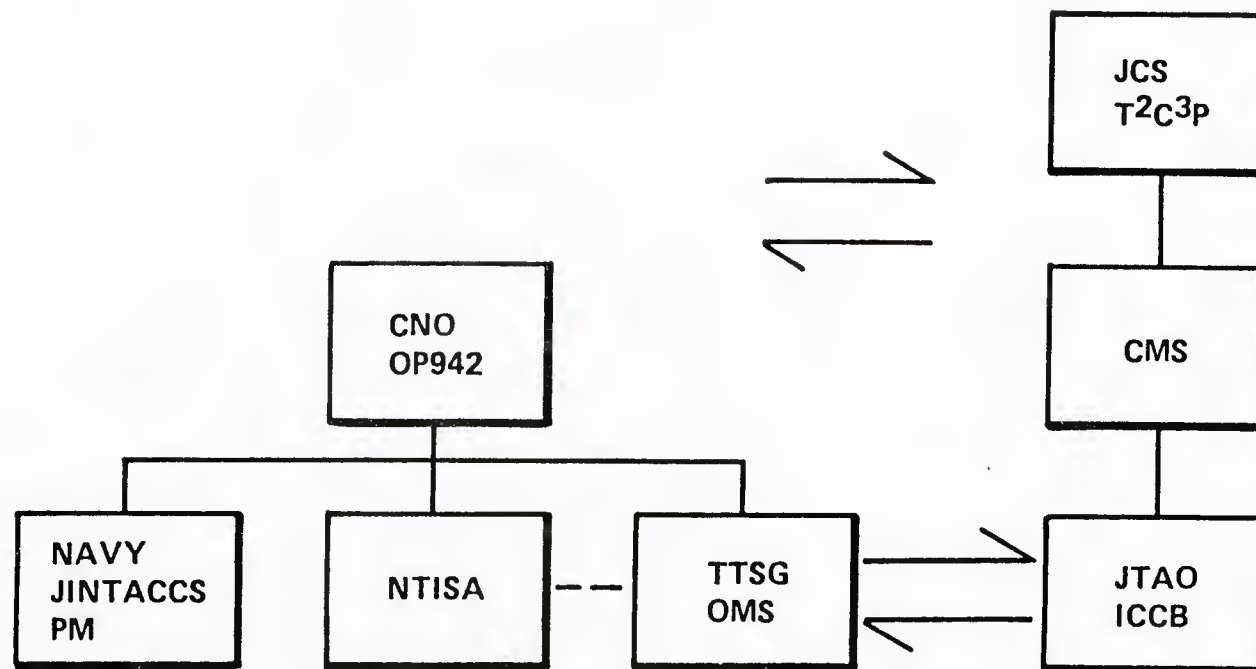


Figure 4-6. Operational JTAO IDS/IDH CM

e. If the operational JTAO change proposal was submitted by a Navy command or activity, and is approved by the OTSG and TTSG OMS, NTISA will forward it to JTC3A (IA/CM Branch) with a copy to OP-942 and the Navy Rep Office.

f. Once the JTC3A CMD has forwarded a JTAO OICP to the CMS for action, the Navy member of the CMS will utilize the applicable OTSG and TTSG OMS report, as well as the applicable ICCB report, in determining the Navy position.

## CHAPTER V TESTING

5. GENERAL. The Navy JINTACCS Test Plan will reflect the guidance and information provided in this chapter and in the Test Plan section of Chapter III. Navy JINTACCS testing will support the JINTACCS Test Directive developed by the JINTACCS Systems Architect/Engineer in coordination with the S/As participating in the JINTACCS Program. The Test Directive describes the test objectives, test responsibilities, and related factors required to plan, design, conduct, and analyze tests. The Joint testing itself is accomplished in two distinct efforts: Developmental Certification Testing (DCT) and Configuration Management Testing (CMT). Joint testing will be preceded by required intra-Navy testing to certify that the Navy C<sup>2</sup> Elements/Systems are ready to enter Joint testing. See Figure 5-1.

### 5.1 JOINT TESTING

The Joint Interface Test Force (JITF) JINTACCS has been assigned the mission of meeting the JINTACCS program objective, specifically to "plan, conduct, and evaluate tests demonstrating the achievement of compatibility and interoperability among Service/Agency tactical command and control (C<sup>2</sup>) systems . . ." In addition, the JITF has a continuing responsibility for configuration management testing of established interfaces.

5.1.1 JOINT TEST CONCEPT. Currently, JINTACCS MTF and JTAO testing is conducted on a decentralized basis through the Joint Interface Test Center (JITC) located at Fort Monmouth, New Jersey and Service Participating Test Units (PTUs), which will generally be located at sites beyond tactical communication range from Fort Monmouth. The location for the TADIL J Central Test Facility will be NOSC, San Diego. Separate series of tests will be accomplished for MTF, TADIL J, and JTAO TADIL A and TADIL B.

5.1.1.1 TYPES OF JOINT TESTS. DCT and CMT are applicable to both MTF and TADIL J testing, but each of the message standards will require a separate and distinct series of DC and CM tests. Operational JTAO TADIL A and TADIL B testing will require CT and CMT.

5.1.1.1.1 DEVELOPMENTAL CERTIFICATION TESTING (DCT). DCT is the general nomenclature for that series of testing of the TIDP-TE once it has been approved for testing by the JINTACCS Program Director. It includes all testing from that time until the TIDP has been certified as ready for OED.

5.1.1.1.2 CONFIGURATION MANAGEMENT TESTING (CMT). CMT is the general nomenclature for testing which is conducted after such time as the TIDP-TE has been certified as ready for OED. CMT comprises two distinct types of tests: TIDP Maintenance Testing (TMT) and IDS maintenance testing (IMT). TMT is conducted until the TIDP is published by JCS as the operational Interface Design Standard (IDS), after which time IMT is conducted.

5.1.1.2 JINTACCS TESTBED. The decentralized test concept has resulted in the establishment of the PTUs which provide the gateways from the JITC to the C<sup>2</sup> Elements.



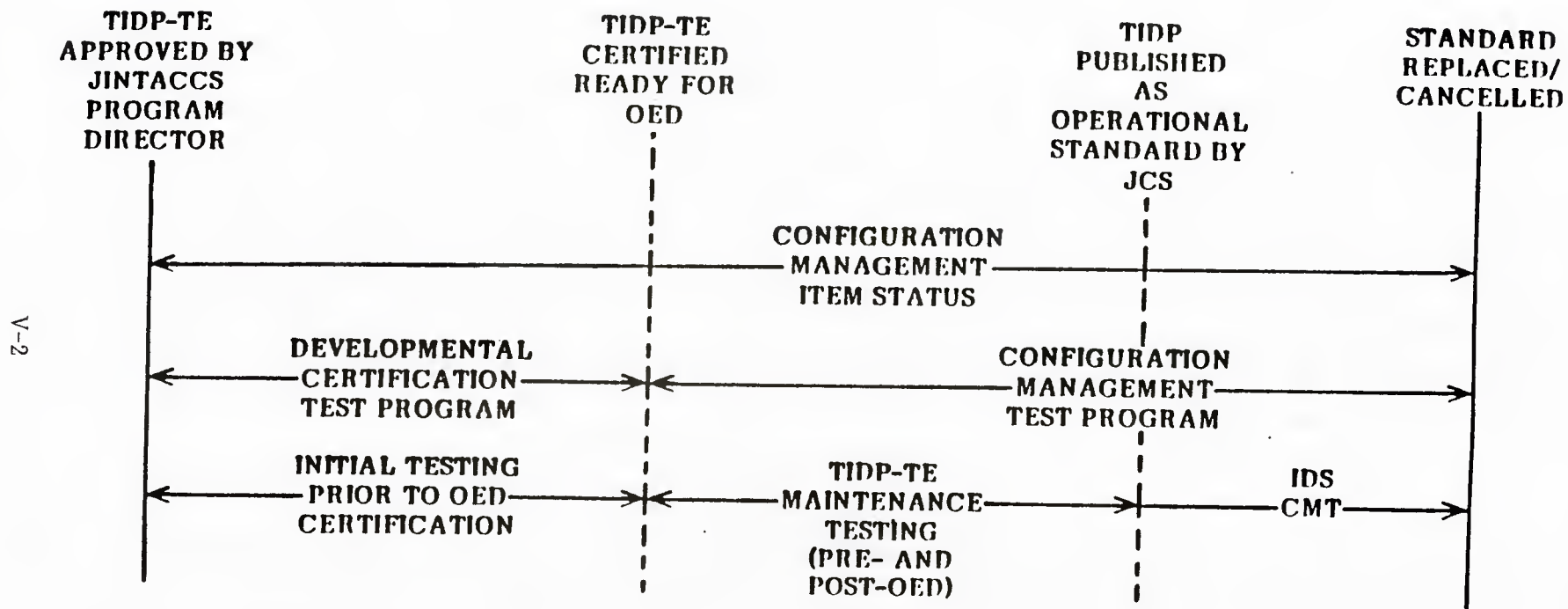


Figure 5-1. JINTACCS Testing Life Cycle for MTF Standards

Different testbed configurations have been designed for MTF, TADIL J, and JTAO Testing.

5.1.1.2.1 JOINT INTERFACE TEST SYSTEM (JITS). The Joint Interface Test System (JITS) consists of the following:

a. Joint Interface Test System (JITS) and Technical Control facility in the Joint Interface Test Center (JITC) at Fort Monmouth, N.J

b. A Remote Unit Interface (RUI) located at the JTAO CM Participating Test Unit (PTU). For the Navy, the RUI is located at the JTAO CM PTU (FCDSSA, San Diego).

c. Environment Simulation Units (ESUs) collocated with the C<sup>2</sup> Elements/Systems. The ESUs are located at the Navy's PTUs, which host the C<sup>2</sup> Elements/Systems.

A Navy communications gateway to the JITC will be located at the NOSC C<sup>3</sup> site.

5.1.1.2.2 NAVY JINTACCS TEST SYSTEMS. The primary Navy unit commitments to the JINTACCS program for testing are the designated PTUs. The designated PTUs provide the C<sup>2</sup> Elements/Systems which have been designated to participate in the program.

a. NAVY PARTICIPATING TEST UNIT (PTU). The Navy Participating Test Units (PTUs) are those organizations designated to test Navy systems participating in the JINTACCS program. Separate and distinct Navy PTUs have been designated for MTF, TADIL J, and JTAO testing. The designated Navy PTU for MTF and TADIL J testing will be determined at a later date. The Fleet Combat Direction Systems Support Activity (FCDSSA) San Diego, FCDSSA Dam Neck, and the Naval Surface Weapons Center (NSWC) Dahlgren, are the designated Navy PTUs for JTAO testing. The test support actions of the several Navy PTUs will be coordinated by the Navy PTU Coordinator (NPTUC). NPTUC will be the intermediary and focal point among the PTUs which host the participating C<sup>2</sup> Elements/Systems and the JITF. The NPTUC is NTISA. Navy PTU relationships are diagrammed in Figure 5-2. Certain general tasks to be performed by the Navy PTUs are to:

- (1) Support both intra-Navy and inter-service testing tasks;
- (2) Prepare test plans to provide for the formation, staffing, training, and operation of JINTACCS type C<sup>2</sup> Elements/Systems identified in the TIDP;
- (3) Prepare Navy C<sup>2</sup> Elements/Systems for entry into the JINTACCS test program.

b. C<sup>2</sup>ELEMENTS AND SYSTEMS. The term C<sup>2</sup> Element refers to a Tactical Command and Control facility which contains hardware, software, personnel, etc., as required to perform planning, controlling, and directing operations. C<sup>2</sup> Elements to be exercised during testing will include: AAWC, ASWC, ASWOC, ASUWC, CATF, EWC, FCC, FOSIC/FOSIF, OTC/CWC, and SUBOPCONCEN. In addition to the command

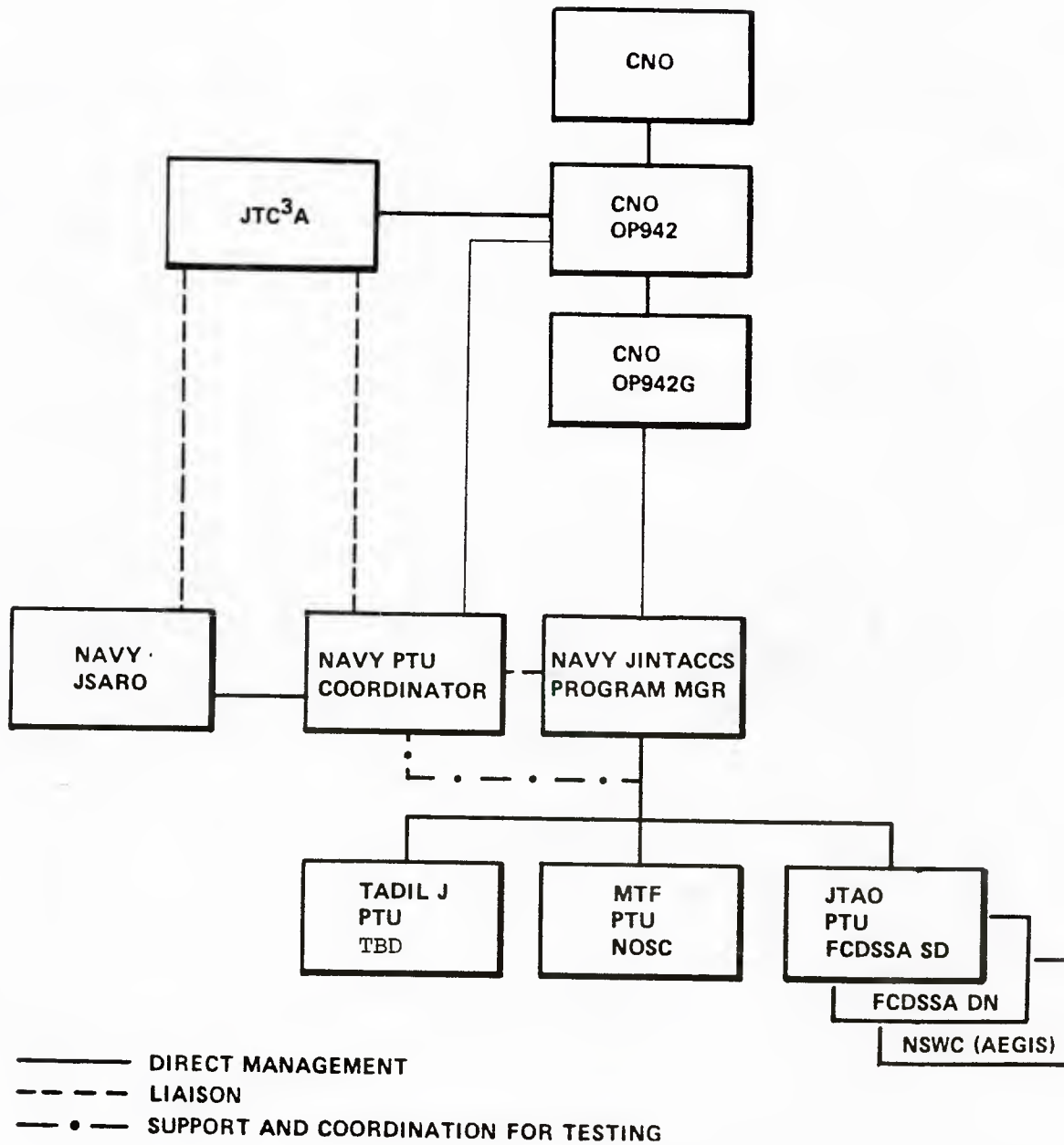


Figure 5-2. Navy Designated PTUs and Test Management

and control shipboard spaces, other supporting facilities will include a communications center, technical control facility, and a working area for the test team members which man the stations during tests. When used in relation to an OED, C<sup>2</sup> Element generally refers to a complete facility in a ship or aircraft platform appropriately modified in accordance with the applicable JINTACCS TIDP-TES.

c. NAVY TEST SYSTEM PARTICIPATION. Navy Test Systems will participate in JINTACCS testing as follows:

(1) Navy C<sup>2</sup> Elements will be mission organized to represent different platform configurations (e.g., CV, LCC, LHA, and E2, F-14 aircraft) as applicable to the specific test scenario being executed. For technical testing, the designation of C<sup>2</sup> Element is intended to mean "representative" C<sup>2</sup> Element, which is a partial configuration containing only those portions needed to conduct a specific test series. The systems required to support the specified C<sup>2</sup> Elements will include NIPS, NTDS, and ATDS, when these are applied to the test series.

(2) For purposes of JINTACCS testing, only those elements necessary to represent the C<sup>2</sup> Element need be employed.

(3) Designated Navy PTUs will be responsible for providing representative C<sup>2</sup> Elements which include the applicable systems. Preparation of these systems and test executions will require, in addition to the actual system software and hardware itself, a functional replica of the C<sup>2</sup> Element that these command support systems normally reside in, when deployed.

(4) C<sup>2</sup> Element functional replicas are normally referred to as mockups. They allow system operators to perform their duties in an exercise environment very similar to that encountered in a real-world situation. Ideally, the mockups are configured with operational equipment consoles, displays, input/output devices, monitoring panels, etc., that are normally found in the real-world C<sup>2</sup> Elements they replicate. In addition, such mockups are provided with access to communication terminals typical of the real-world environment.

(5) For JINTACCS testing purposes, the mockups will require both representative tactical and test-only communications. The test-only communications are necessary to coordinate activity during test execution.

5.1.2 INTRA-NAVY TESTING. The Joint Test Complex of JITC and PTUs is illustrated in Figure 5-3. Intra-Navy testing will be conducted to demonstrate how well the Navy systems meet their technical and operational requirements; to provide data to assess implementation and operational risk for decision making; to verify that the technical, operational, and support problems identified in previous testing have been corrected; and to ensure that all critical issues have been adequately considered.

5.1.2.1 OBJECTIVES. Objectives of Intra-Navy Testing are as follows:

a. Intra-Navy testing will be used to assess whether appropriate progress is being made in the evolution of interface capabilities; uncover real or potential problem areas, both technical and operational; verify both the ability of the system to participate in the next level and the interface design to support the missions; and finally, to validate the skill levels of the test operators for Joint testing and the operational crews for the OED.



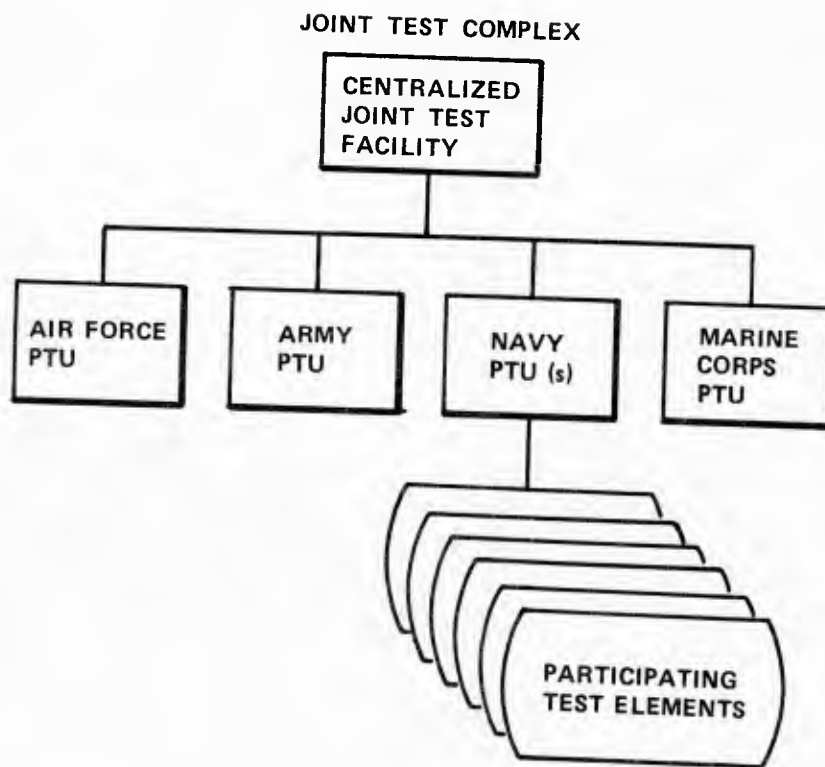


Figure 5-3. Joint Test Complex

b. The objectives of the intra-Navy JINTACCS test program include the ability to exhibit staged interface development progress and increased confidence in the ability of Navy systems which implement JINTACCS designs to perform Navy missions and meet JCS/JINTACCS objectives at the same time. The stages where testing is required are prior to implementation of the TIDP-TE, just prior to entry into joint interface tests, prior to entry into the OED, and prior to entry into Configuration Management Testing.

5.1.2.2 APPROACH. All Joint testing will be preceded by intra-Navy testing to determine whether the Navy C<sup>2</sup> Elements/Systems are ready to enter Joint testing. Under the JINTACCS program test concept, each Service is allowed to select its own approach to preliminary testing, i.e., single system at a time, integrated systems, informal intra-Service tests, or tests with the JITF (on a not-to-interfere basis).

5.1.2.3 EVALUATION. At the conclusion of internal testing by the PTU, the PTU will request CO NTISA to determine whether the system is ready for Joint testing. As Navy PTU Coordinator, CO NTISA will schedule tests, using one or more of the approaches listed above. After review and evaluation of test results and data analysis, CO NTISA will determine whether the system is ready for Joint testing and report his determination to CNO (OP-942) and the Navy JINTACCS Program Manager.

5.2 JTAO CONFIGURATION MANAGEMENT TESTING. CM testing of the operational JTAO standards is more specifically referred to by the JINTACCS program as IDS Maintenance Testing (IMT). Navy JINTACCS Test Management organization for JTAO CM Testing is depicted in Figure 5-4.

5.2.1 NAVY PARTICIPATING TEST UNITS (PTUs). The Navy PTUs for JTAO CM Testing will be the software life cycle support activities and laboratories of systems implementing TADIL A. The PTUs for the surface ship systems will be the Fleet Combat Direction System Support Activity (FCDSSA) San Diego, and FCDSSA, Dam Neck. In addition, FCDSSA SD will be the PTU for E-2 ATDS, and the PTU for AEGIS will be Naval Surface Weapons Center (NSWC), Dahlgren.

5.2.2 NAVY JTAO PTU COORDINATION. The activity responsible for coordinating and supporting the test activities of the Navy PTUs for JTAO CM Testing will be NTISA.

5.2.3 JOINT ANALYSIS REVIEW PANEL (JARP). The Joint Analysis Review Panel (JARP) meets after every JTAO CM Test to review the analysis of test data and evaluate test results, including whether a system which was the subject of the test passed or failed the test. The JARP is chaired, technically supported, and administered by the JITF. Each Service/Agency (S/A) designates a single spokesman to represent the S/A position regarding the test evaluation. The Navy's designated spokesman at the JARP will be the Navy PTU Coordinator, NTISA.

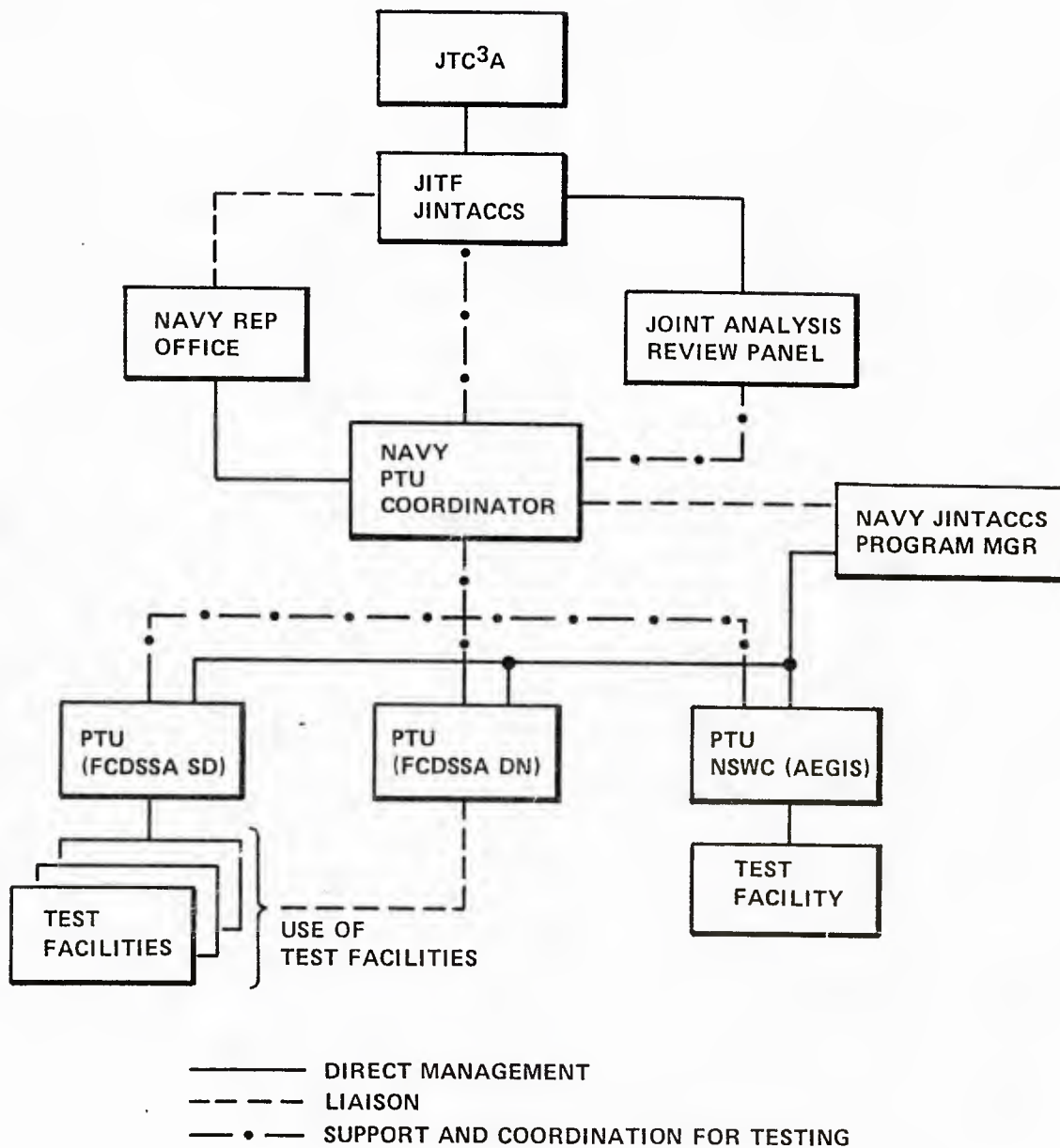


Figure 5-4. Navy Test Management Organization for JTAO CM Testing

5.2.4 NAVY TESTING RESPONSIBILITIES. The distribution of Navy testing responsibilities follows.

5.2.4.1 NAVY PTU COORDINATOR (NPTUC). The responsibilities of the NPTUC for JTAO CM testing are assigned to NTISA and will include the following:

- a. Coordinate with other Navy activities to determine Navy inputs to the joint test scheduling process;
- b. Review and validate JITF-generated JTAO CM test procedures for accurate representation of Navy test units' capabilities and implementation. Consolidate inputs from Navy PTUs and to provide a single Navy input to JITF (copy to NJSARO).
- c. Ensure requisite technical control and analysis personnel from the PTU are available for the test;
- d. Monitor test conduct at Navy test unit site;
- e. Review the analysis of test results;
- f. Develop Navy positions on all identified preliminary Problem/Trouble Reports (PTRs) with Navy participants at a Navy pre-JARP meeting;
- g. Provide a representative who will act as Navy spokesman at the JARP;
- h. Provide support relative to the JARP report to the Navy CMS representative.

5.2.4.2 NAVY PTUs. Responsibilities of the Navy PTUs will include the following:

- a. Provide inputs to the NPTUC for scheduling of joint tests;
- b. Assist the NPTUC in the review and validation of test procedures;
- c. Provide requisite technical control and analysis personnel and facilities for testing;
- d. Man operator positions at Navy test unit, and carry out appropriate actions as described in test procedures and as indicated by the Test Director during test conduct;
- e. Perform on-line test analysis and recording of test results; execute prescribed data extraction procedures, including reproduction and distribution of Data Extraction (DX);
- f. Conduct post-test analysis of test results; prepare preliminary PTRs; review preliminary PTRs received from other sources; and provide analysis inputs to the NPTUC for formulation of Navy positions on all identified preliminary PTRs for the JARP;
- g. Provide technical support to Navy spokesman (NPTUC) at the JARP.



5.2.4.3 NAVY REPRESENTATIVE OFFICE. JTAO CM testing responsibilities of the Navy Representative Office will include the following:

a. Effect liaison with JTF to effect the Navy's Joint Test Scheduling requirements as determined by the NPTUC;

b. Ensure the appropriate JITS DX is distributed to requesting Navy test units, as coordinated by the NPTUC;

c. Ensure that JTF-generated preliminary PTRs are distributed to appropriate Navy test units and to the NPTUC:

(1) Submit PTRs to JTC3A by S/A PTU(s) and distribute to all S/As for review;

(2) Present Navy positions at joint meetings or support transient representatives as directed by OP-942;

(3) Represent Navy interests as directed by OP-942;

(4) Participate with PTUs and PTU coordinator in the preparation, conduct and analysis of joint tests as well as pre-JARP, CMAG and JICMB staffing.

5.2.5 NAVY CERTIFICATION TESTING FOR JTAO. Prior to entering Joint CM testing or becoming a candidate for joint certification, each new Navy system or system modification which may impact TADIL A will be subject to Navy Certification Testing. Navy Certification Testing will be accomplished as follows:

a. OPNAVINST 9410.1 assigned NTISA the responsibility for certification of tactical data systems interoperability. Accordingly, CO NTISA will test and evaluate each new system or system TADIL A modification and will determine whether the subject system is certified and ready for joint CM testing.

b. Navy Certification Testing will determine compliance by systems under test to the requirements of the current Link-11 Operational Specification (OPSPEC). The degree of expected compliance for a given system is stated in the form of message implementation in the OPSPEC.

c. NTISA will ensure that the Link-11 OPSPEC and the TADIL A IDS/IDH are in agreement, including the message standards, systems descriptions, and message implementation for each system. The TADIL A IDH must correctly reflect the message implementation by each system as described in the Link-11 OPSPEC. The message implementation must satisfy the minimum implementation requirements, as specified in the TADIL A IDS.

d. The software life cycle support activity, the PTU, for the system under test will ensure that the baseline documents which represent the system under test are clearly and correctly identified. The PTU will also ensure that the message implementation for the system under test is correctly described in the OPSPEC.

5.3 MESSAGE TEXT FORMATS (MTF) TESTING. JINTACCS MTF standards are subject to Joint Developmental Certification Testing (DCT) and TIDP Maintenance Testing (TMT).

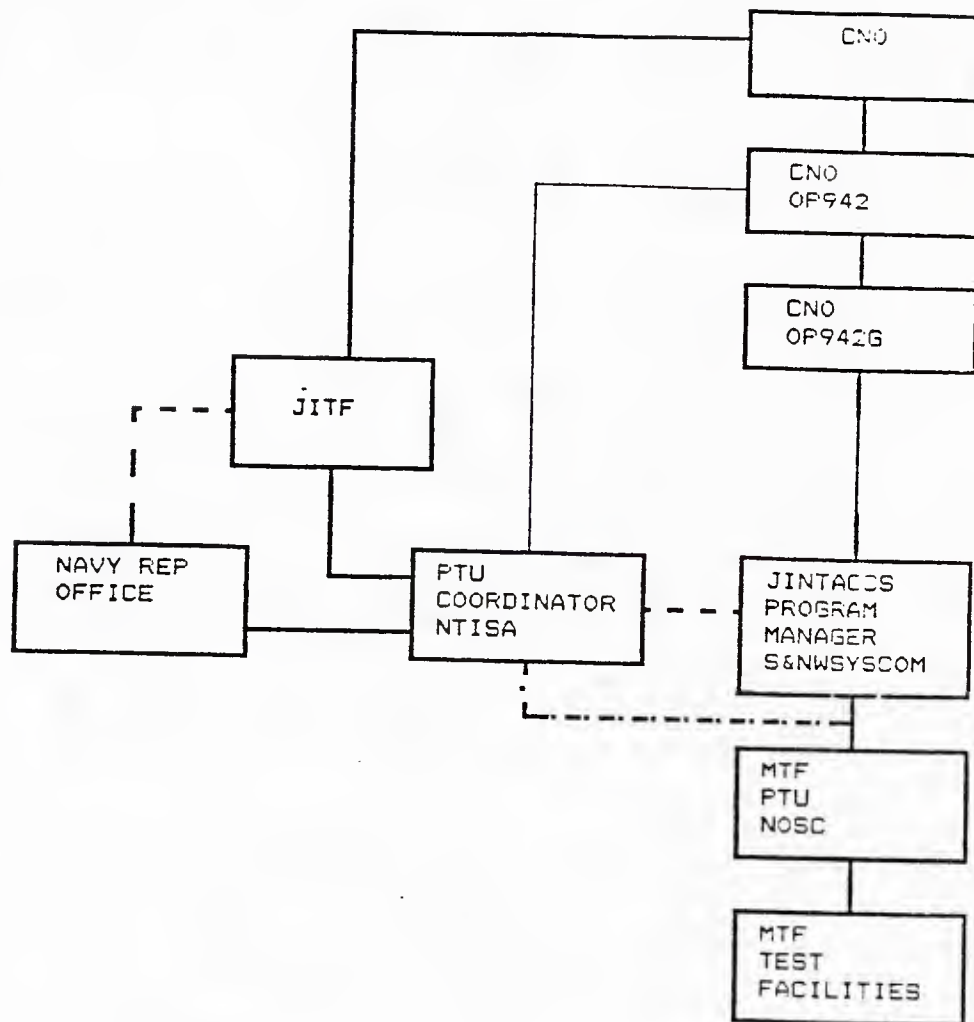
5.3.1 ENGINEERING. NOSC is responsible for the technical engineering and management for the Navy portion of the JINTACCS MTF testing. As tasked by the Navy JINTACCS Program Manager, NOSC will initiate studies for the planning, analysis and design of intra-Navy interfaces as well as interfaces between Navy and other Service/Agency facilities. They will also perform impact analysis and system integration in concert with, and to the degree that these activities are not tasked for accomplishment by the SYSCOMs/PDAs, life cycle software support activities, etc. Navy system modifications will be coordinated by the Navy JINTACCS Program Manager, but they will normally be accomplished by SYSCOM/PDAs or the designated software support activity. Test support capabilities will be designed by NOSC and implemented at the PTU. As tasked by the Navy JINTACCS Program Manager, the NOSC/Navy Telecommunications System complex of terminal, transmission, switching, cryptographic, and control devices may be used to exercise the Message Text Format capabilities for the Navy. This will permit the necessary interface with DoD systems required for the exercise of command and control over the naval operating forces and permit the transmission of information to, and between, units of the Navy and other Services/Agencies in joint test operation.

5.3.1.1 PARTICIPATING TEST UNITS (PTU). The Naval Ocean Systems Center (NOSC), San Diego is the Navy PTU responsible for Navy MTF PTU management. The Navy MTF PTU management organization is diagrammed in Figure 5-5.

5.3.2 INTRA-NAVY JINTACCS TEST PROGRAM FOR MTF. During development and prior to JCS approval of the TIDP, the intra-Navy interoperability test program will consist of three test phases:

5.3.2.1 MTF QUALIFICATION TESTING. As soon as Navy C<sup>2</sup> Elements/Systems have completed implementation of the JINTACCS designs, they should be subjected to qualification test exercises. Qualification testing will be carried out in a simulated environment which generates only the small volume of data required to show that an interface can be initiated and a basic set of information exchanged. At this test level, the orientation of testing is not that of an operational user, but of one more concerned with technical specifications and milestones. Qualification testing will be conducted to demonstrate that the engineering/software design and development process is complete, that the design risks have been minimized, and that the system will meet the TIDP-TE specifications when it is introduced for interface testing. To be considered qualified to commence intra-Navy testing, the participating systems must be able to exchange compatible signals and basic message information in a useable format.

5.3.2.2 MTF DESIGN TESTING. Design testing will be accomplished at an advanced state of TIDP-TE implementation, and subject the system to simulated data which approaches real data in terms of character and volume. The testing will include all hardware and software intended to be used during JITF testing. To be considered ready for JINTACCS testing, a system must be capable of (1) exchanging data in the TIDP prescribed format, and (2) processing such data to extract useable information. As such, it will include human factors testing to demonstrate a satisfactory man - machine interface, using qualified and experienced operators/crews.



\_\_\_\_\_ DIRECT MANAGEMENT  
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 . . . . . SUPPORT AND COORDINATION FOR TESTING

Figure 5-5. NPTU Management & Coordination for Message Text Formats (MTF)

5.3.3 JOINT MTF TESTING. The Joint testing of MTF comprises both DC and CM Testing.

5.3.3.1 MTF DC TESTING. The Joint MTF DC Testing which will be supported by Navy organizations consists of the four types of tests shown in Figure 5-6 and described as follows:

5.3.3.1.1 QUALIFICATION TESTING. The objective of the qualification testing is to ensure that each C<sup>2</sup> Element, with all the modifications required by JINTACCS, is capable of participating in joint testing. The Navy and each participating S/A is responsible for testing its own C<sup>2</sup> Element prior to its entry into formal joint testing.

5.3.3.1.2 COMPATIBILITY TESTING. Compatibility testing is the responsibility of the JITF Commander and is conducted under his direction. Its purpose is to ensure that the communications systems (including operational security devices) of each C<sup>2</sup> Element function together satisfactorily in exchanging a minimum subset of data in the appropriate joint testing environment. This testing is conducted each time an additional C<sup>2</sup> Element/System is added to the Joint Test Complex (JTC). Objectives for compatibility testing are:

a. Interoperability Testing. Interoperability testing is the responsibility of the JITF Commander and is conducted under his direction. An evolutionary, or building-block, approach will be used in the planning and execution of these tests. Initial tests will be simple in nature, with a gradual increase in the complexity and size of each test, until a total evaluation of all interfaces is achieved. Test scenarios will be constructed to fully exercise C<sup>2</sup> Element capabilities. Interoperability testing demonstrates the ability of C<sup>2</sup> Elements to exchange, process, and interpret properly all data described in the TIDP-TE.

b. OED Readiness. Prior to the OED, all systems will be interfaced and tested in a simulated environment during a scripted pre-OED exercise, to evaluate readiness for the OED.

5.3.3.2 MTF CM TESTING. Upon completion of DC testing, MTF standards are subject to CM testing.

5.3.3.2.1 JITF CM TESTING. After the MTF TIDP-TE has been certified by the JINTACCS Program Director as ready for OED, the TIDP will be subject to TIDP Maintenance Testing (TMT). Once JCS has approved the MTF standards, they will be considered operational and will be subject to IDS Maintenance Testing (IMT). Systems implementing the MTF IDS will be subject to Operational Certification Testing. C<sup>2</sup> Elements/Systems which participated successfully in the MTF OED will be considered operationally certified. Once a C<sup>2</sup> Element/System is operationally certified, it is then subject to Requalification Testing, on a recurring basis. All of the above tests are conducted by the JITF.



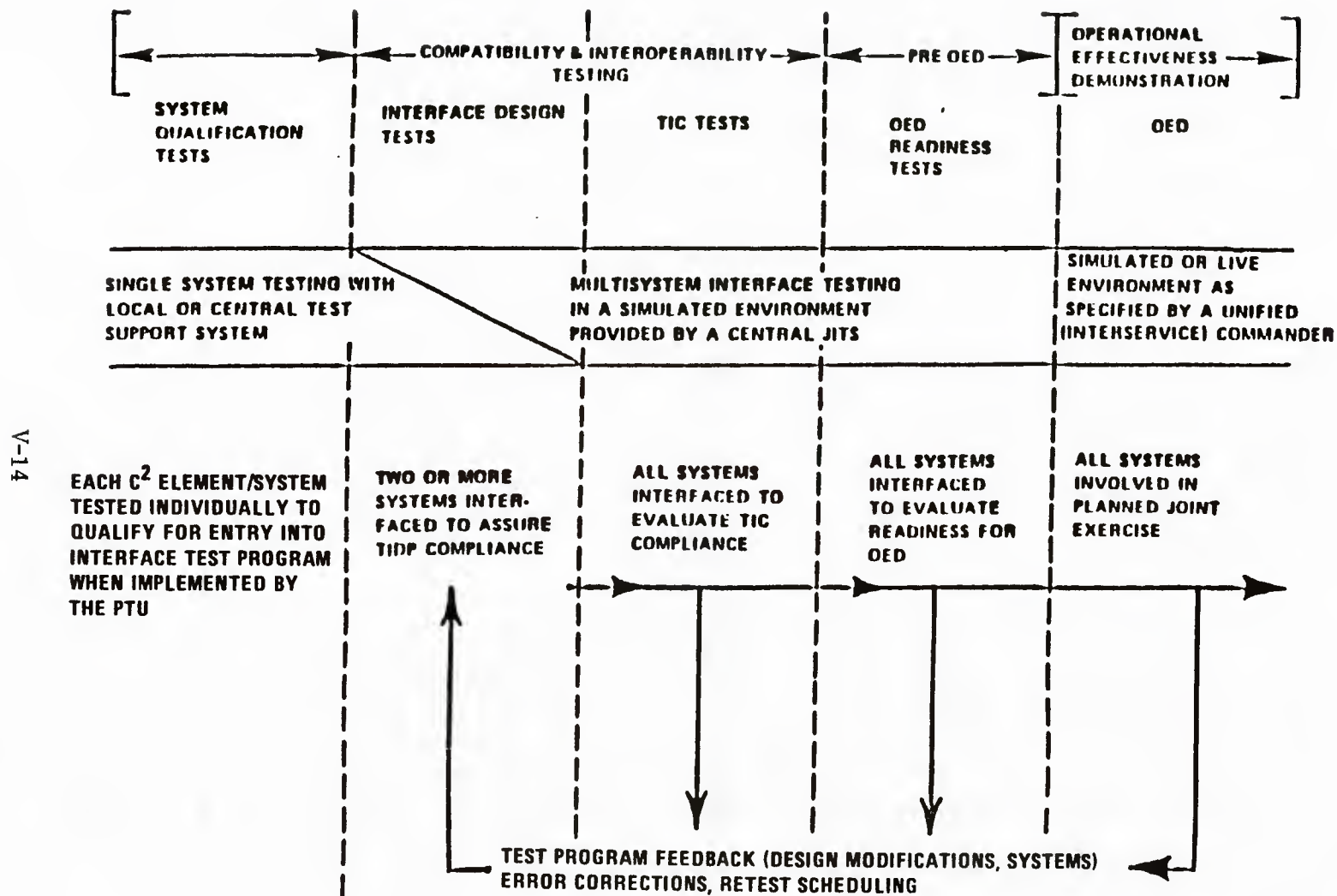


Figure 5-6. Joint MTF DC Testing to be Supported by the Navy

5.3.3.2.2 NAVY TESTING. Navy certification testing will be conducted prior to joint certification with similar requirements as described for JTAO. The appropriate JINTACCS configuration item or Navy OPSPEC will be used as the standard for testing.

5.3.3.3 JOINT ANALYSIS REVIEW PANEL (JARP). The Joint Analysis Review Panel (JARP) meets after every Joint MTF Test to review the analysis of test data and evaluate test results. The JARP is chaired, technically supported, and administered by the JTC3A. Each Service/Agency (S/A) designates a single spokesman to represent the S/A position regarding the test evaluation. The Navy's designated spokesman at the JARP will be the Navy PTU Coordinator.

5.4 JTIDS AND TADIL J TESTING. Details of TADIL J Test Management are to be determined.

ANNEX A

BIBLIOGRAPHY

ANNEX A  
BIBLIOGRAPHY

I. DOD AND JCS JOINT INTEROPERABILITY DOCUMENTS.

1. DoD Dir 4630.5, 28 January 1967, "Compatibility and Commonality of Equipment for Tactical Command and Control and Communications." Established policy and procedures to ensure that tactical command, control, and communications equipments possess that compatibility and commonality essential to joint military operations and assigned to the Secretary of Defense (SECDEF), the Secretaries of the Military Departments, the Joint Chiefs of Staff, and the commanders of the unified and specified commands responsibility for carrying out that policy.
2. JCSM-154-67, 17 March 1967, "Guidance on Coordination of DoD Intelligence Data Handling System with Tactical Intelligence Support Systems." Established guidance concerning coordination of the DoD Intelligence Data Handling System with tactical intelligence systems and assigned responsibilities to the Defense Intelligence Agency (DIA), the Services, and the unified and specified commands for carrying out that guidance.
3. JCS Memorandum of Policy (MOP) No. 160 (2nd Revision), 1 November 1976, "Compatibility and Commonality of Equipment for Tactical Command, Control, and Communications." JCS MOP No. 160 established policy and procedures, provided guidance, and prescribed responsibilities of the Joint Chiefs of Staff necessary to implement the provisions of DoD Dir 4630.5. Among other things, it prescribed to the commanders of the unified and specified commands and to the Services detailed procedures to be used for coordination and submission to the Joint Chiefs of Staff of all requirements for tactical command, control, and communications equipment.
4. DoD Dir 5010.19, 17 July 1968, "Configuration Management," with Change 2, 7 April 1970. Established DoD policies governing configuration management of systems, equipment, and other designated material items.
5. DoD Instruction (Inst) 5010.21, 6 August 1968, "Configuration Management Implementation Guidance," with Change 1, 29 January 1969. Provides guidance for implementing DoD configuration management policies.
6. Memorandum by the Deputy Secretary of Defense, 27 November 1968, "Testing and Demonstrating the Composite System Performance of the 407L System and Tactical Data Systems of Other Services for Combined Use in Joint Military Operations."
7. SM-92-69, 13 February 1969, "Compatibility of Tactical Air Control/Air Defense Systems in Joint Military Operations." SM-92-69 established the TACS/TADS interface program to demonstrate the compatibility, interoperability, and operational effectiveness of selected current and developmental Service tactical data systems. The CNO was given the responsibility for the TACS/TADS program as Executive Agent for the Joint Chiefs of Staff.
8. JCSM-397-69, 3 July 1969, "Demonstration and Sustainment of Interoperability of Automated Tactical Data Systems in Joint Operations." JCSM-397-69 promulgates a plan by the Joint Chiefs of Staff which includes procedures to identify and process requirements for the interfaces of systems; the design of



functional interfaces; testing and demonstration of the compatibility, interoperability, and capability to exchange data securely; and sustained configuration management of operational interfaces.

9. SM-138-71, 11 March 1971, "Compatibility of Tactical Air Control/Systems; Tactical Air Defense Systems in Joint Military Operations." SM-138-71 provides guidance that Airborne Warning and Control Systems (E-3A) should be compatible and interoperable with the systems contained in the TACS/TADS interface program if the E-3A becomes available for testing prior to completion of the program. The E-3A will be available for testing in the TACS/TADS test bed.
10. SM-205-71, 1 April 1971, "Joint Interoperability of Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations." SM-205-71 established the GAMO program with the CSA designated as JCS Executive Agent to develop plans and conduct tests to achieve interoperability and joint operational effectiveness for the TC<sup>2</sup> systems used in support of ground and amphibious military operations. (Superseded by SM-184-78, 7 March 1978.)
11. JCSM-153-71, 1 April 1971, Joint Interoperability of Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations." JCSM-153-71 reported establishment of the GAMO program to SECDEF and indicated that provision should be made to provide additional resources to the Services for initiation and accomplishment of this program.
12. SM-255-72, 30 May 1972, "Joint Interoperability of Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations." Directs the JINTACCS program to consider North Atlantic Treaty Organization (NATO) requirements in interface definition when these requirements become known.
13. DoD Dir S-3115.7, 25 January 1973, "Signals Intelligence (SIGINT)," with Change 1, 9 October 1973. Assigns responsibilities, roles, and missions to DoD components with regard to the SIGINT mission of the United States.
14. SM-73-73, 15 February 1973, "Consideration of Low-Level User Access to Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations." SM-73-73 requests the GAMO Executive Agent to determine the requirement for direct voice or digital data access by low-level users of one Service to the tactical command and control systems of other Services and, if such a requirement exists, to establish standards for the necessary data link.
15. SM-485-73, 24 October 1973, "Concepts of SIGINT Support to Military Commanders." Establishes doctrine and procedures for providing Signals Intelligence (SIGINT) support to military commanders in all circumstances under which military forces are expected to be employed. Planning for SIGINT support to military commanders will be in consonance with this concept.
16. SM-78-74, 11 February 1974, "Initiation of Preliminary Phase II (Planning Phase) Efforts on the Joint Interoperability of Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations Program." Approved initiation of Phase II (Planning Phase) efforts of the GAMO program.

17. Area Coordination Paper (ACP) Number 12, 8 July 1974. Identifies interservice interoperability requirements covering the entire spectrum of automated tactical command and control. Management actions to achieve interoperability are directed in Section IV of ACP Number 12.
18. JCS MOP No. 95. (4th Revision), 23 July 1974, "Electronic Warfare." JCS MOP No. 95 provides Electronic Warfare (EW) policy.
19. SM-362-75, 2 July 1975, "Joint-Tactical Information Distribution System/Ground and Amphibious Military Operations Design Capability." Directed that the information transfer standards for the JTIDS be in compliance with the GAMO TIDP-TE interface standards and that JTIDS be utilized to support GAMO testing where practicable.
20. JCSM-336-76, 24 September 1976, "Designation of an Operational Effectiveness Demonstration Commander for Joint Interoperability of Tactical Command and Control Systems in Support of Ground and Amphibious Military Operations," Directed that CINCLANT, in collaboration with USCINCRAD, plan, conduct, and evaluate the intelligence interface being developed in the GAMO Program. Additionally, CINCLANT and USCINCRAD have been tasked to collaborate with the OJCS J3 and J5 Directorates to develop suitable joint field training exercises to support OEDs of the four functional interface groups being developed in the program.
21. Memorandum by the Director of Defense Research and Engineering, 13 January 1977, "Joint Tactical Information Distribution System." Requested the JCS and Services to establish a JTIDS Message Standards Working Group (JMSWG), chaired by the Air Force and under the JINTACCS (formerly GAMO) program; tasks the program to prepare a TIDP for JTIDS; and plan and schedule Joint Service Testing of the JTIDS TIDP under auspices of the JTIF.
22. M-207-77, 3 March 1977, "Ground and Amphibious Military Operations Technical Interface Concepts Document." Approved the Technical Interface Concepts (TIC), dated 1 October 1976, for the JINTACCS (formerly GAMO) program.
23. SM-500-77, 3 June 1977, "Future Configuration Management of the Interface Design Standards for Operational Tactical Command and Control Interfaces." Provides procedures through which the JCS performs configuration management of the interface design standards for operational tactical command and control interfaces after the required compatibility and interoperability demonstrations for each interface have been successfully completed and the interface is considered operationally acceptable by the JCS. (Superseded by MJCS-152-82, 7 July 1982.)
24. SM-575-77, 27 June 1977, "Joint Tactical Information Distribution System Message Standards." Tasked the JINTACCS (formerly GAMO) program with the responsibility to develop the message standards for the JTIDS, including development of a Technical Interface Design Plan (TIDP), reflecting both inter-service and intra-service JTIDS information exchange requirements, and to plan, schedule, conduct, and evaluate joint testing of the TIDP to validate capability and interoperability. The development of the JTIDS TIDP is being carried out through the JTIDS Message Standard Working Group (JMSWG).

25. SECDEF Memorandum, 2 August 1977, "Reorganization of the DoD Program to Achieve Interoperability of Tactical Command and Control Systems for Ground and Amphibious Military Operations (GAMO)." Cited weaknesses in the management structure of the GAMO program. Reorganized the GAMO program and changed it to the JINTACCS program. Directed changes to the management and structure including establishment of a high level council for joint tactical command, control, and communications systems (JTC<sup>3</sup>S) to oversee the program; expanded the GAMO Management Office and changed it to the JINTACC Systems Architecture/Engineering Office; directed the establishment of Service/Defense Agency Support Offices; directed the appointment of a Program Director having decision authority; and modified the JCS Joint Standardization Group for Tactical Command, Control, and Communication (JSG/TCCCS) to provide for OSD participation.
26. SM-21-78, 12 January 1978, "Establishment of the Joint Tactical Command and Control, and Communications Systems Council." Establishes the JTC<sup>3</sup>S and furnishes its terms of reference. The JTC<sup>3</sup>S Council provides a forum for resolution of issues in OSD and JCS tactical command, control, and communications programs not requiring the attention of higher authority, oversees the JINTACCS program and other joint programs as appropriate, provides direction and guidance for the development of tactical command, control, and communications architecture, and ensures attention to the interoperability of the tactical/strategic interface.
27. SM-35-78, 16 January 1978, "Terms of Reference for the Joint Standardization Group for Tactical Command, Control, and Communications Systems." Prescribes the organization, responsibilities, and functions of the JSG/TCCCS. (Supersedes SM-552-70, 20 July 1970.)
28. SM-184-78, 7 March 1978, "The Program for Achieving Joint Interoperability of Tactical Command and Control Systems." Establishes the JINTACCS program with the CSA designated as the JCS Executive Agent to ensure the achievement of compatibility and interoperability of the tactical command and control systems used in joint military operations and the development and testing of joint message standards for the JTIDS. In accomplishing these tasks, US/NATO interoperability requirements will be considered to the maximum extent practicable. (This document supersedes SM-205-71, 1 April 1971.)
29. SM-42-79, 23 January 1979, "Operational Effectiveness Demonstrations for the Program for Achieving the Joint Interoperability of Tactical Command and Control Systems." Requests CINCLANT, in collaboration with USCINCRCD, to plan, conduct, and evaluate, for the JCS, the OEDs for JINTACCS. Six general objectives for the conduct of the OEDs are set forth.
30. JINTACCS Management Plan (U), March 1980 (CONFIDENTIAL) (under revision by JTC3A).
31. MOP 184, 13 June 1980, "Coordination on U.S. Positions in NATO C<sup>3</sup> Forums." Establishes and promulgates the policy of the JCS for coordinating U.S. positions in designated NATO C<sup>3</sup> forums.



32. SM-37-82, 4 February 1982, "Implementation of Interface Design Standards to Achieve Joint Interoperability of Tactical Command and Control Systems." Directs implementation of the respective JINTACCS developed standards within one year after approval by the JCS of the 1983 and 1985 OED final evaluation reports. (Superceded by MJS-158-84, 29 August 1984.)
33. MJCS-152-82, 7 July 1982, "Configuration Management of the Interface Design Standards for Operational Tactical Command and Control Interfaces." Modifies the existing configuration management procedures for operational tactical command and control interfaces, and further defines the nature of the assistance to be provided to the JSG/TCCCS by the JINTACCS Executive Agent. It also contains a plan for the incorporation of JINTACCS developmental standards into JCS numbered publications. (Supercedes SM-500-77, 3 June 1977.)
34. JCS, SM-750-82, 6 December 1982, "Responsibilities of the Joint Interoperability of Tactical Command and Control Systems Program." JCS and the Services determine that the requirement for JINTACCS will continue to exist beyond FY 1985. Chief of Staff, U.S. Army, will continue as Executive Agent for the JINTACCS Program.
35. SECDEF Memo of 23 May 1983, "Disestablishment of the Joint Tactical Command, Control, and Communications Systems (JTC<sup>3</sup>S) Council." Disestablished the JTC<sup>3</sup>S Council and directed that all other provisions of the SECDEF MEMO of 2 August 1977 (See DOD 1) remain intact.
36. Letter, JTF-JINTACCS, MOJF-POA, 15 June 1983, Subject: Problem/Trouble Report (PTR) and Joint Analysis Review Panel (JARP) Procedures.
37. Joint Standardization Group/Tactical Command, Control, and Communications Systems Interface Design Handbook (IDH) Volume 1, Reissue 1, Configuration Management Procedures, July 1983.
38. OSD Memo Dated 27 January 1984, "Joint Tactical Command, Control, and Communications Agency (JTC<sup>3</sup>A)." Proposal to implement the establishment of the JTC3A for approval by the Secretary of Defense.
39. DAMO-C4J, March 1984, "JINTACCS Configuration Management Plan (CMP), Reissue 2."
40. DOD Dir 5154.28, 5 July 1984, "Joint Tactical Command, Control, and Communications Agency (JTC3A)." Established the JTC3A, describing responsibilities, functions, relationships, and authorities. Transferred all functions and resources of the JINTACCS Program to JTC3A.
41. MJCS-158-84, 29 August 1984, "Joint Interoperability of Tactical Command and Control Systems Implementation Master Plan." Codifies the new Mandatory Implementation date of September 1986 for the first five functional segments. (Supercedes SM-37-82, 4 February 1982.)
42. JINTACCS Program Directive for Developmental Certification and Configuration Management Testing (PD/DCT-CMT), (Draft) 20 September 1983.



## II. U.S. NAVY JINTACCS-RELATED DOCUMENTS

1. OPNAVINST 9410.1, 2 September 1978, "Policies and Procedures for Interoperability of Tactical Data Systems." Promulgates policy/procedures for the establishment, maintenance, and certification of interoperability among USN tactical data systems.
2. OPNAVINST 5450.202, 18 June 1979, "Navy Tactical Interoperability Support Activity; Mission and Functions of."
3. OPNAVINST 9410.2, 20 August 1980, "Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Program." Assigns the responsibilities and provides the policy guidance necessary to implement the JINTACCS program in the Navy.
4. NAVSEA Ltr 612/DLL Ser 104 of 20 February 1981, "Naval Tactical Data System (NTDS) Improvement Plan." Provides a plan for the improvement of the NTDS and addresses the interdependent areas of software, systems engineering, and hardware. The detailed planning in enclosure (4) emphasizes upgrades for the CP-642 computer-equipped ships.
5. NAVSEA 0967-LP-027-8600 of June 1981, "Combat Direction Systems Ten-Year Plan FY 1982-1992." Provides the strategy and direction for design, development, test, acquisition, installation, and life cycle support of CDSs, including NTDS.
6. CNO Ltr Ser 942/C345988 of 18 August 1981, "Joint Tactical Information Distribution System (JTIDS) Message Standard Requirements." Promulgates a definitive JTIDS/TADIL J Message Standard Implementation Plan spanning the period from the JTIDS DTDMA IOC to full TADIL J using a two-stage phased implementation.
7. CNO Ltr Ser 942/346079 of 17 September 1981, "Navy Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Steering Committee Subcommittees; establishment of." Formally establishes five subcommittees of the Navy JINTACCS Steering Committee.
8. OPNAV Instruction 9410.3, Change 1, 11 April 1983, "U.S. Navy Operational Tactical Digital Information Link (TADIL) Standards Group (OTSG) and Technical TADIL Standards Group (TTSG); establishment of and procedures for." Formally establishes the Navy OTSG and TTSG and prescribes procedures for the conduct of meetings and other functions.
9. OPNAV Instruction 9410.2A (Draft), 28 August 1984, "JINTACCS PROGRAM." Incorporates, in 9410.2, provisions for the management of the development, testing, and implementation of Message Text Format (MTF) standards developed under the auspices of the JINTACCS Program.
10. Navy Concept of Operations for JINTACCS Character Oriented Messages (5 Sep 1984). Establishes the Navy's concept of operations for use of JINTACCS Message Text Format (MTF) Standards for daily and Joint Operations.
11. Naval Warfare Publication (NWP) 10-1-12 Series (Proposed). Promulgates JINTACCS MTF, as integrated with existing Navy standards and procedures, as a Navy Reporting Structure (NRS), which will use a data set library format and be configured in minimum (message) set (MINSET) concept.

### III. TADIL J/LINK-16 - RELATED DOCUMENTS.

1. JCS SM 575-77, 27 June 1977, Subject: Joint Tactical Information Distribution System Message Standards.
2. NAVMAT Ser 09/636 of 24 June 1980, "Joint Tactical Information Distribution System (JTIDS) Project (PME 109); approval to establish." The request to establish PME 109 as the Navy Program Management Office for JTIDS is approved.
3. CNO Ser 942/C345933 of 27 February 1981, "Tactical Digital Information Link (TADIL) J Interface Implementation Plan." Recommends a more conservative redefinition of the IOC for TADIL J, and rephrasing to support a full TADIL J implementation.
4. CNO Ser 942/C345988 of 8 August 1981, "Joint Tactical Information Distribution System (JTIDS) Message Standard Requirements." Enclosure promulgates as a definitive JTIDS/TADIL J Message Standard Implementation Plan spanning the period from the JTIDS DTDMA IOC in 1987 (i.e., Stage I) to full TADIL J by 1993.
5. OP 942 Ser 094/C346145, of 20 November 1981, "Joint Tactical Information Distribution System (JTIDS)." Modifies JTIDS installation plan. Interoperability baseline for fleet units, other services and Allies will continue to be Link-11. Other system compatibilities mentioned.
6. JTIDS Navy Test and Evaluation Master Plan No. J357, Rev. 2, 8 January 1982.
7. NAVELEX Ser 00/166 of 12 July 1982, "Joint Tactical Information Distribution System (JTIDS) Message Standard Requirements." Provides the cost and schedule impact of implementing specific Joint Service Interoperability Messages for Stage 1 TADIL J.
8. NAVELEX Interface Design Specification Joint Tactical Information Distribution (JTIDS) (Full Scale Development Program) Distributed Time Division Multiple Access (DTDMA) Terminal Equipment, Rev. 1, August 1982.
9. JCS C35-M-709 of 14 September 1982, TADIL J Implementation. Concern that the Services' budget for TADIL J development and C&I testing is either inadequate or unprogrammed. Asks for adequate funding support to implement TADIL J operationally by 1989.
10. DAMO-04, 17 September 1982, "Implementation of the Joint TADIL J Interface." Requests each service provide schedule, funding profiles, and test methodology data to Director JINTACCS for future decision making.
11. CNO Ser 094/344364 of 17 September 1982, "TADIL J Implementation Steering Group (TISG)." Establishes a TISG. Lists representation of the group along with meeting and agenda information.

12. CNO Memo Ser 094/344427 of 1 November 1982, "Navy Approval of the JTIDS Technical Interface Design Plan (TIDP) Edition." Navy reviewed and considered adequate the TIDP as an interface design baseline which satisfies Navy basic operations requirements.
13. DAMO-C4 Memo of 14 March 1983, "Testing of the TADIL J Joint Interface." JINTACCS Director requests concurrence to develop the Decentralized TDSs/Colocated JTIDS Terminals Testbed.
14. NAVMATNOTE 5430 of 12 July 1983, "Lead Systems Command for TADIL J Implementation and Interoperability Matters." Assigns lead SYSCOM responsibilities for TADIL J Implementation and Interoperability Matters to the Naval Electronic Systems Command.
15. NAVELEX 623A Ser 128-623, 5 August 1983, "Navy Tactical Digital Information Link (TADIL) J Compatibility and Interoperability (C&I) Testing; tasking for." In support of lead SYSCOM assignment, responsibility for the planning and conduct of Navy TADIL J C&I testing is delegated to NOSC. Includes specific tasks.
16. CNO Ser 094/40331531 of March 1984, "JTIDS/TADIL J Integration." CNO requests CHNAVMAT initiate a JTIDS/TADIL J program review to identify technical and funding requirements to meet the 1989 IOC of JTIDS/TADIL J in the Fleet.
17. OPNAV Instruction C9410.4, 11 December 1984. Provides information, assigns responsibilities, and provides guidance for Navy introduction of the JTIDS and the implementation of the JTIDS message standard, Tactical Digital Information Link (TADIL) J.
18. OS-516.1, of 1 March 1985. Provides the official U.S. Navy interpretation of all applicable international, Joint Service/Agency, and U.S. Navy Link-16 protocols, instructions, and/or agreements for U.S. Navy Model 5 Link-16 use.

ANNEX B

GLOSSARY



ANNEX B  
GLOSSARY

AAWC	Antiair Warfare Commander
ASIS	Amphibious Support Information System
ASUWC	Antisurface Warfare Commander
ASWC	Antisubmarine Warfare Commander
ASWOC	Antisubmarine Warfare Operations Center
ATDS	Airborne Tactical Data System
BOM	Bit Oriented Message(s)
C&I	Compatibility and Interoperability
C <sup>2</sup> Element	Command and Control Element
CAS	Close Air Support
CHNAVMAT	Chief of Naval Material
CI	Configurations Item
CINCLANT	Commander in Chief Atlantic Command
CINCLANTFLT	Commander in Chief Atlantic Fleet
CM	Configuration Management
CMAG	Configuration Management Analysis Group
CMD	Configuration Management Division
CME	Configuration Management Element
CMP	Configuration Management Plan
CMS	Configuration Management Subgroup
CMT	Configuration Management Testing
CNM	Chief, Naval Material
CNO	Chief of Naval Operations

COM	Character Oriented Message(s) - being replaced by MTF
COMOPTEVFOR	Commander Operational Test and Evaluation Force
COMSEC	Communications Security
COO	Concept of Operations
CT	Certification Testing
DC	Developmental Certification
DCS	Defense Communications System
DCT	Developmental Certification Testing
DERG	Data Extraction and Reduction Guidelines
DIA	Defense Intelligence Agency
DICP	Developmental Interface Change Proposal
DIRNSA	Director, NSA
DX	Data Extraction
EA	Executive Agent
EAR	Executive Agent's Representative
ESU	Environmental Simulation Unit
EWG	Electronic Warfare Coordinator
FCC	Fleet Command Center
FCDSSA	Fleet Combat Direction Systems Support Activity
FCTC	Fleet Combat Training Center
FOSIC	Fleet Ocean Surveillance Information Center
FOSIF	Fleet Ocean Surveillance Information Facility
FYDP	Five Year Defense Plan
GAMO	Ground and Amphibious Military Operations
GENSER	General Service
IA	Interoperability Assurance
IC2S	International Command and Control Interoperability Subgroup

ICCB	Interface Configuration Control Board
IDH	Interface Design Handbook
IDS	Interface Design Standards
IJMS	Interim JTIDS Message Standards
IMT	IDS Maintenance Testing
IOP	Interface Operating Procedures
ITAWDS	Integrated Tactical Amphibious Warfare Data System
JARP	Joint Analysis Review Panel
JCS	Joint Chiefs of Staff
JICMB	Joint Interface Configuration Management Board
JINTACCS	Joint Interoperability of Tactical Command and Control Systems
JIOP	Joint Interface Operating Procedures
JIP	Joint Implementation Plan
JITC	Joint Interface Test Center
JITF	Joint Interface Test Force
JITS	Joint Interface Test System
JMP	JINTACCS Management Plan
JMS	JTIDS Message Standards
JPTM	Joint Procedures Test Manual
JSARO	JINTACCS Service/Agency Representative Office
JSASO	JINTACCS Service/Agency Support Office
JTAO	Joint Tactical Air Operations
JTC	Joint Test Complex
JTC <sup>3A</sup>	Joint Tactical Command, Control and Communications Agency
JTIDS	Joint Tactical Information Distribution System
LINK-4A	See TADIL C

LINK-11	See TADIL A
LINK-16	See TADIL J
MCSF	Mobile Cryptologic Support Facility
MCSG	Mobile Cryptologic Support Group
MCTSSA	Marine Corps Tactical Systems Support Activity
MED	Message Element Dictionary
MTF	Message Text Formats (replaces COM)
NADC	Naval Air Development Center
NAVAIR	Naval Air Systems Command
NAVELEX	Naval Electronics Systems Command
NAVINTCOM	Naval Intelligence Command
NAVMAT	Naval Material Command
NAVPHIBSCOL	Naval Amphibious School(s)
NAVSEA	Naval Sea Systems Command
NAVTELCOM	Navy Telecommunications Command
NESEADDET	Naval Electronic Systems Engineering Activity Detachment
NIPS	Naval Intelligence Processing System
NOSC	Naval Ocean Systems Center (San Diego)
NPTUC	Navy PTU Coordinator
NRS	Navy Reporting System
NSA	National Security Agency
NSWC	Naval Surface Weapons Center
NTDS	Navy Tactical Data System
NTISA	Navy Tactical Interoperability Support Activity
NTS	Navy Telecommunications System
OED	Operational Effectiveness Demonstration



OICP	Operational Interface Change Proposal
OMS	Operational Message Standards
OPNAV	Operations Navy Staff of the CNO
OPR	Office of Primary Responsibility
OPSPEC	Operations Specification
OSD	Office of the Secretary of Defense
OTC/CWC/ CATF	Officer in Tactical Command/Composite Warfare Commander/ Commander Amphibious Task Force
OTSG	Operational TADIL Standards Group
PD	Program Direction
PDA	Principal Development Activity
PM	Project Manager
POA&M	Plan(s) of Action and Milestones
POC	Point of Contact
PTE	Problem/Trouble Report
PTR	Problem/Trouble Report
PTU	Participating Test Unit
RUI	Remote Unit Interface
S/A	Service/Agency (*)
S&NWSYSCOM	Space and Naval Warfare Systems Command
SEASIA	Southeast Asia Interface Program
SOP	Standard Operating Procedure
STANAG	Standardization Agreement (NATO)
SUBOPCONCEN	Submarine Operational Control Center
SYSCOM	System Command
T <sup>2</sup> C <sup>3</sup> p	Theater Tactical Command, Control and Communications Panel
TADIL A	Tactical Digital Information Link A (JCS Pub 10)

TADIL B	Tactical Digital Information Link B (JCS Pub 10)
TADIL C	Tactical Digital Information Link C (JCS Pub 10)
TADIL J	Tactical Digital Information Link J
TCC	Technical Coordinating Committee
TIC	Technical Interface Concepts
TIDP	Technical Interface Design Plan
TIDP-FE	TIDP-Final Edition
TIDP-TE	TIDP-Test Edition
TIOP	Technical Interface Operating Procedure
TJIOP	TADIL J Interface Operating Procedure
TMT	TIDP Maintenance Testing
TSG	Technical Standards Group
TTSG	Technical TADIL Standards Group
WESTPACNORTH	Northwestern Pacific (Japanese-U.S. Interface Buffer)
WOD	Washington Operations Directorate

(\*) In JINTACCS, this means USA, USN, USAF, USMC, DIA and NSA.

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ANNEX C

JINTACCS DEVELOPMENT SCHEDULES



FUNCTIONAL SEGMENT	CALENDAR YEAR												
	78	79	80	81	82	83	84	85	86	87	88	89	90
INTELLIGENCE	FEB ▲	1 JULY ■	1 OCT	MAY ◆		MAY ◆		MAY ◆					
AIR OPERATIONS		AUG ▲		2 NOV ■	15 JUN	MAY ◆		MAY ◆					
OPERATIONS CONTROL			APRIL ▲		1 NOV ■	15 MAR		MAY ◆					
FIRE SUPPORT			AUG ▲			(IF REQUIRED) ■		MAY ◆					
MARITIME						1 SEPT ▲	15 JAN ■	MAY ◆					

## LEGEND:

- ▲ TIDP-TE
- COMPATIBILITY AND INTEROPERABILITY TESTING SCHEDULE
- ◆ OPERATIONAL EFFECTIVENESS DEMONSTRATIONS

Figure C-1. JINTACCS MTF Development Schedule

# TADIL J IMPLEMENTATION

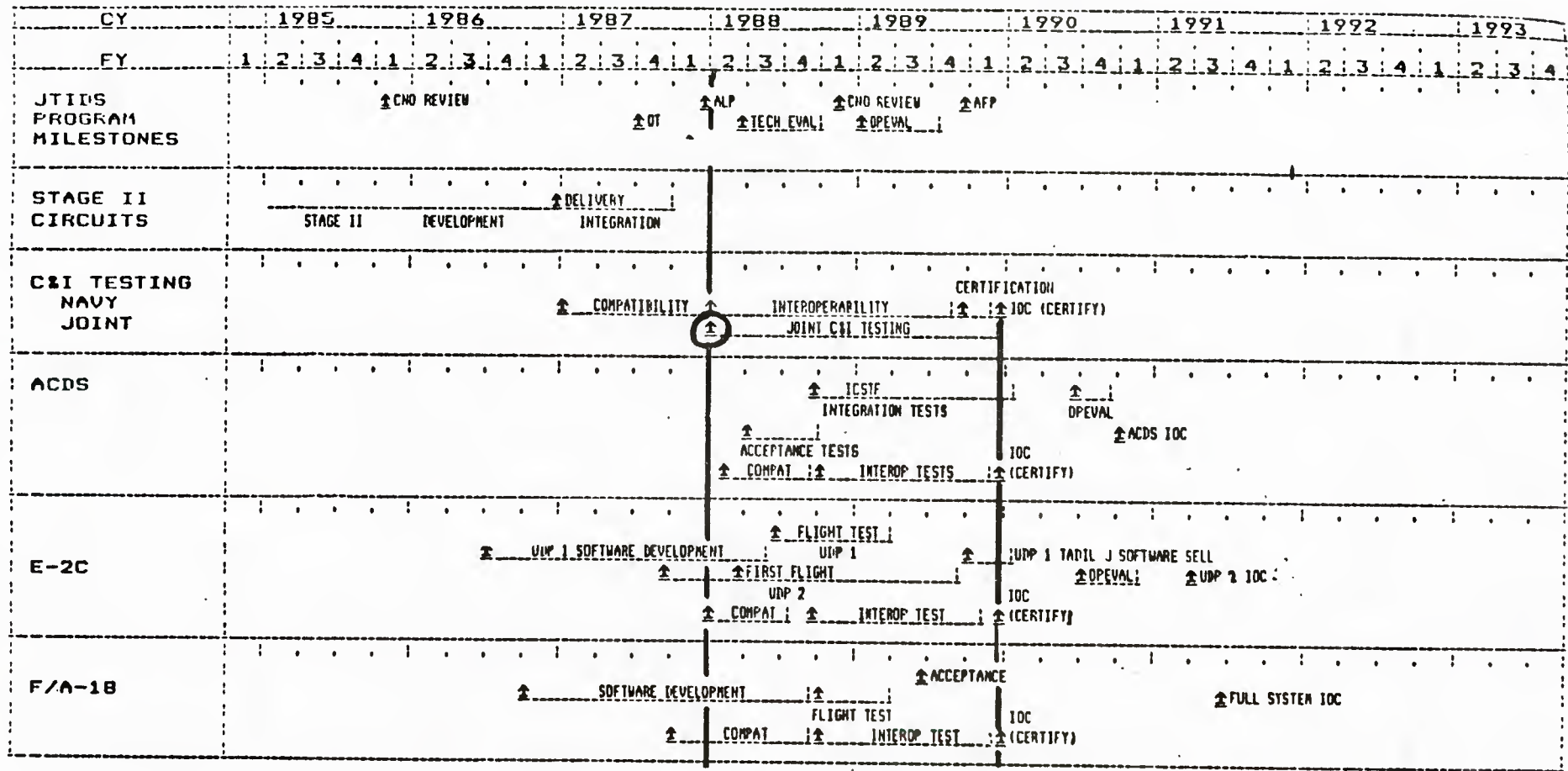


Figure C-2. Navy JINTACCS TADIL J Development Schedule

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